

25 AC February 15, 2008 4886 East Jensen Avenue Fresno, California 93725

> Tel: 559-237-5567 Fax: 559-237-5560

> > www.krcd.org

Mr. Che McFarlin California Energy Commission 1516 Ninth Street Sacramento, CA 95814

Re:

Kings River Conservation District Community Power Plant Application for

Certification (07-AFC-7) Responses to Data Requests 1-89

Dear Mr. McFarlin:

Kings River Conservation District (KRCD) hereby submits the attached responses to California Energy Commission (CEC) data requests 1-89 for the Kings River Conservation District Community Power Plant (KRCD CPP) Application for Certification (AFC). The KRCD CPP is a nominal 565 megawatt (MW) natural gasfired combined cycle base load power plant to be located near the City of Parlier, in Fresno County.

As General Manager of KRCD, I hereby attest, under penalty of perjury, that the attached data request responses are true and accurate to the best of my knowledge. Please contact our consultant, Amy Cuellar of Navigant Consulting at (916) 631-3211 if you have any questions.

Sincerely, Lemes V. Rechards, for

David Orth

General Manager, Kings River Conservation District

DOCKET 07-AFC-7 DATE FEB 2 5 2008

DO/JR/ss

File: 536.02 L08-0041

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA

APPLICATION FOR CERTIFICATION for the KINGS RIVER CONSERVATION DISTRICT COMMUNITY POWER PROJECT

Docket No. 07-AFC-7

PROOF OF SERVICE (Established: 12/5/2007)

INSTRUCTIONS: All parties shall either (1) send an original signed document plus 12 copies or (2) mail one original signed copy AND e-mail the document to the address for the Docket as shown below, AND (3) all parties shall also send a printed or electronic copy of the document, which includes a proof of service declaration to each of the individuals on the proof of service list shown below:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 07-AFC-7
1516 Ninth Street, MS-14
Sacramento, CA 95814-5512
docket@energy.state.ca.us

<u>APPLICANT</u>

Jim Richards
Kings River Conservation District
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Frenso, CA 93725-1899
jrichards@krcd.org

<u>APPLICANT CONSULTANT</u>

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DECLARATION OF SERVICE

I, Ann Czerwonka , declare that on <u>February 25, 2008</u>, I deposited copies of the attached KRCD CPP (07-AFC-7) Responses to CEC data requests 1-89 , in the United States mail at <u>Sacramento, California</u> with first-class postage thereon fully prepaid and addressed to those identified on the Proof of Service list above

OR

Transmission via electronic mail was consistent with the requirements of California Code of Regulations, title 20, sections 1209, 1209.5, and 1210. All electronic copies were sent to all those identified on the Proof of Service list above.

- Gur Brunko

I declare under penalty of perjury that the foregoing is true and correct.

APPLICATION FOR CERTIFICATION 07-AFC-7 RESPONSES TO DATA REQUESTS 1-89



Energy for our Future

Submitted to: CALIFORNIA ENERGY COMMISSION

FEBRUARY 2008

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Technical Area: Air Quality

Data Request 1:

Please explain the differences between the emission values presented in Appendix 8.1-5 and Tables 8.1-17 to 20.

Response:

The annual emissions rates in Application for Certification (AFC) Volume 2 - Appendices 8.1-5a (GE) and 8.1-5b (Siemens), Table 22, have been multiplied by approximately 1.01 to show Kings River Conservation District Community Power Plant (KRCD CPP) annual emissions, which are shown in AFC Section 8.1–Air Quality, Tables 8.1-17 through 8.1-20. The intent is to provide an additional margin of 1% for calculation of the Emission Reduction Credits (ERCs) required by the KRCD CPP.

Technical Area: Air Quality

Data Request 2:

Please provide the correct facility emissions for NOx, VOC, PM10, SOx and CO.

Response:

The annual emissions rates for the KRCD CPP are found in AFC Volume 2 - Appendices 8.1-5a and 8.1-5b, Table 22.

Technical Area: Air Quality

Data Request 3:

Please provide references of the cited PM2.5 emissions for the turbines, cooling tower, emergency generator, diesel fire pump, and auxiliary boiler.

Response:

The particulate matter 2.5 micrograms in diameter or smaller (PM2.5) emissions rate of 0.00028 pounds per million British thermal units (lbs/MMBtu) cited in the AFC for the combustion turbines, auxiliary boiler and emergency diesel generator, all of which will be fueled by natural gas, comes from the following document, "England, G.C., Development of Fine Particulate Emissions Factors and Speciation Profiles for Oil and Gas-fired Combustion Systems, Final Report, 2004," specifically Table 3-4. The PM2.5 emissions rate of 0.004 lbs/MMBtu cited in the AFC for the diesel fire pump comes from Table 3-5 of this document. No references were found for PM2.5 emissions from evaporative cooling towers. Since the implicit ratios of PM2.5/particulate matter 10 micrograms in diameter or smaller (PM10) for the gas and diesel-fired combustion equipment ranged from approximately 2 to 15%, a higher PM2.5/PM10 ratio (25%) was chosen for the cooling tower.

The most conservative approach for estimating PM2.5 emissions is to assume that 100% of PM10 is PM2.5. Note that even if all PM2.5 emissions rates (from all pieces of KRCD CPP equipment) are assumed as equal to the PM10 emissions rates used in the AFC, the resulting impacts of PM2.5 will be no greater than those for PM10. Since KRCD CPP will offset its PM10 emissions by more than 100%, emissions of PM2.5 will also be offset by a like amount, and impacts from both PM10 and PM2.5 emissions will be mitigated to levels of insignificance.

Technical Area: Air Quality

Data Request 4:

Please provide option contracts and/or evidence of acquisition of ERCs for the NOx, VOC, SOx, PM10, and PM2.5 liability of the project.

Response:

Please see response to Data Request Number 5.

Technical Area: Air Quality

Data Request 5:

If the applicant is unable to adequately respond to the Data Request above, please provide a status report starting February 1, 2008 and continuing monthly until the report identifies option contracts and/or evidence of acquisition of ERCs for the NOx, VOC, SOx, PM10 and PM2.5 liability of the project. The report should be specific to each pollutant and provide new information and update information from previous monthly status reports as appropriate. The reports should include for the ERCs:

- a) contact names and telephone numbers;
- b) company or source names;
- c) pollutant credit types and amounts in lbs/day;
- d) ERC certificate numbers;
- e) the methods of emission reductions (e.g., shutdown, reduction of hours of operation, emission controls, etc.);
- f) the status of ERC or option negotiations; and
- g) the location of the emission reduction credits.

Response:

Some of the information has been provided in the previously filed Confidential Offset Strategy which also includes a description of the overall acquisition strategy being implemented by KRCD. KRCD is working diligently with the San Joaquin Valley Air Pollution Control District (SJVAPCD) to meet its requirement that sufficient emissions offsets are identified to enable issuance of the Preliminary Determination of Compliance (PDOC). As discussed in the AFC, KRCD's primary focus is on creating new local offsets. KRCD will continue to update the CEC Staff by filing the Monthly Status Reports required by this data request beginning March 1, 2008. These Status Reports will be filed under a Request For Confidentiality.

Technical Area: Air Quality

Data Request 6:

Please provide the specific portion of PM10 to be mitigated with SOx emission reduction credits.

Response:

The actual amount of sulfur dioxide (SO2) that will be used to offset PM10 emissions cannot be determined at this time, given the nature and potential sources of ERCs. However, it is estimated that on the order of 75 tons of SO2 will be used to offset up to approximately 40 tons of PM10.

Technical Area: Air Quality

Data Request 7:

Please provide an analysis demonstrating the use of the proposed 1.87 to 1 SOx for PM10 trading ratio would mitigate the project's new PM10/PM2.5 emissions impacts.

Response:

The 1.87:1 ratio for the use of SO2 for PM10 is based on an analysis performed by the SJVAPCD for Fresno County. Per discussions in January 2008, with James Sweet and Errol Villegas of the APCD, it was agreed that it makes the most sense to use an inter-pollutant offset ratio already developed by the SJVAPCD. Mr. Sweet has provided KRCD CPP with a spreadsheet, which documents the basis for the 1.87:1 ratio. This spreadsheet is included as Attachment Air-1.

Please contact Mr. Sweet, Atmospheric Modeler, at (559) 230-5810 or the SJVAPCD permit engineer for the KRCD CPP, Jerry Sandhu at (559) 230-5829, for additional information regarding this request.

ATTACHMENT AIR-1

Interpollutant Offset Ratio Spreadsheet

Notes for the Fresno/Madera Interpollutant Analysis

Combined emissions and inventories from Fresno and Madera Counties are used due to the evaluations of source interactions. This relationship was established by analysis performed for the SJVAPCD PM10 SIP.

The interpollutant relationship established for Fresno County in this analysis would also be applicable to Madera County.

Tons of SOx to Equal Effect of 1 Ton of PM10 1.866 See SOxPM10 worksheet for calculations

Tons of NOx to Equal Effect of 1 ton PM10 4.202 See NOxPM10 worksheet for calculations

Input data for the interpollutant worksheets are from the Annual and Annual based on Monthly worksheets. These worksheets are data and analyses submitted for the PM10 SIP

The AOI worksheet provides area of influence evaluations used to analyze specific episodes in the PM10 SIP Episode evaluations reveal a variety of source areas for different episodes.

This justifies the use of the entire county, and in some cases more than one county, as the source area for annual interpollutant evaluation.

		I								
PM10 Interpollutant	Offset Ra	tio Analysis								
	no County									
PM10										
	Notes	Units	Estimate	Uncertainty						
"Vegetative Burning" Total	1	μg/m³	7.48	2.43	"Annua	l based on Me	onthly" spe	ciation works	heet cells G6 and H6	
Industry Component (30%)	2	μg/m³	2.24		"Fresn	o Annual" wor	ksheet for s	speciated roll	back analysis	
Regional Background (20%)	3	μg/m ³	0.45		п					
Industry minus Background		μg/m ³	1.80		ıı .					
County Contribution	4	μg/m ³	0.90		п					
Organic Carbon PM10 Inventory - Fresno/Madera Co.	5	ton/day	5.63		" Requ	ired to use ba	se year em	issions that a	re related to the obse	rved speciatio
County Impact		μg/m ³ per ton	0.16	0.21						
				0.11						
Sulfate										
Ammonium Sulfate	6	μg/m³	2.55	0.30	Annua	based on Mo	nthly, spec	iation worksh	eet cells M6 and N6	
Regional Background	7	μg/m ³	1.00		"Fresn	o Annual" wor	ksheet for s	speciated roll	back analysis	
Ammonium Sulfate minus Background		μg/m ³	1.55		п					
County Contribution	8	μg/m ³	0.78		ıı .					
SOx Inventory - Fresno/Madera Counties	9	ton/day	9.08		" Requ	ired to use ba	se year em	issions that a	re related to the obse	rved speciatio
County Impact		μg/m³ per ton	0.09	0.10	·					·
				0.08						
Tons of SOx to Equal Effect of 1 Ton of PM10	10		1.866	2.21	0.35					
				1.43	-0.44					
1. Per SJVUAPCD and CARB, PM10 emissions from si	tationary ir	ndustrial combust	ion sources a	re included						
in the Vegetative Burning category from Chemical Ma	ass Balan	ce modeling perfo	rmed for the	SJVUAPCD						
2003 PM10 Attainment Plan (Fresno - Drummond me										
2. Per SJVUAPCD, 30% of this category is attributed to	stationary	/ industrial combu	ustion sources	S.						
3. Per SJVUAPCD, regional background is estimated to	be 20% (of net concentration	on after previ	ous						
adjustment to Vegetative Burning category.										
4. Contribution from sources within Fresno & Madera C	ounties is	50% of net conce	entration after	previous						
adjustments to Vegetative Burning category.										
5. Organic carbon PM10 inventory for Fresno/Madera C	Counties th	nat contributes to	this monitorin	g location;						
from SIP inventory with updates and adjustments base	sed on CC	OS study.								
6. Ammonium sulfate category from Chemical Mass Ba	lance mod	deling performed	for the SJVUA	APCD						
2003 PM10 Attainment Plan (Fresno - Drummond me	onitoring s	tation).								
7. Per SJVUAPCD, regional background of ammonium	sulfate is	estimated to be 1	μg/m ³ .							
8. Contribution from sources within Fresno County is 50										
adjustment to Vegetative Burning category.										
SOx inventory for Fresno/Madera Counties that cont	ributes to t	this monitoring lo	cation;							
from SIP inventory with updates and adjustments based	sed on CC	OS study.								
10. PM10 County Impact divided by Ammonium Sulfate		•								

PM10 Interpollutan	t Offset Ra	ntio Analysis				
-	no County					
PM10						
	Notes	Units	Estimate	Uncertainty		
"Vegetative Burning" Total	1	μg/m³	7.48	2.43		"Annual based on Monthly" speciation worksheet cells G6 and H6
Industry Component (30%)	2	μg/m³	2.24			"Fresno Annual" worksheet for speciated rollback analysis
Regional Background (20%)	3	μg/m³	0.45			
Industry minus Background		μg/m³	1.80			
County Contribution	4	μg/m³	0.90			
Organic Carbon PM10 Inventory - Fresno/Madera Co.	5	ton/day	5.63			" Required to use base year emissions that are related to the observed speciation
County Impact		μg/m ³ per ton	0.16	0.21		
				0.11		
Nitrate						
Ammonium Nitrate	6	μg/m³	12.0	1.1		Annual based on Monthly, speciation worksheet cells O6 and P6
Regional Background	7	μg/m³	1.00			"Fresno Annual" worksheet for speciated rollback analysis
Ammonium Nitrate minus Background		μg/m³	10.99			II
County Contribution	8	μg/m ³	5.50			II
NOx Inventory - Fresno/Madera Co.	9	ton/day	144.78			" Required to use base year emissions that are related to the observed speciation
County Impact		μg/m³ per ton	0.04	0.04		
				0.03		
Tons of NOx to Equal Effect of 1 ton PM10	10		4.202	5.09	0.89	
·				3.13	-1.07	, , , , , , , , , , , , , , , , , , , ,
1. Per SJVUAPCD and CARB, PM10 emissions from	stationary	industrial combus	stion sources	are included		
in the Vegetative Burning category from Chemical I						
2003 PM10 Attainment Plan (Fresno - Drummond i	monitoring	station).				
2. Per SJVUAPCD, 30% of this category is attributed			ustion source	es.		
3. Per SJVUAPCD, regional background is estimated						
adjustment to Vegetative Burning category.						
Contribution from sources within Fresno & Madera	Counties is	s 50% of net cond	entration afte	r previous		
adjustments to Vegetative Burning category.						
Organic carbon PM10 inventory for Fresno/Madera	Counties t	hat contributes to	this monitori	ng location;		
from SIP inventory with updates and adjustments b						
Ammonium nitrate category from Chemical Mass B	alance mo	deling performed	for the SJVU	APCD		
2003 PM10 Attainment Plan (Fresno - Drummond i	monitoring	station).				
7. Per SJVUAPCD, regional background of ammonius	m nitrate is	estimated to be	1 μg/m³.			
8. Contribution from sources within Fresno County is						
adjustment to Vegetative Burning category.						
NOx inventory for Fresno County that contributes to	this monit	toring location;				
from SIP inventory with updates and adjustments b	ased on C	COS study.				
10. PM10 County Impact divided by Ammonium nitrate	County Im	pact.				

	А	В	С	D E	F	G H	I	J	K	L	M
	Fresno -	General Note	Geologic and Construction	Mobile Exhaust	Tire and Brake Wear	Organic Carbon	Vegetative Burning	Ammonium	Ammonium Sulfate	Marine	Unassigned
	Drummond.							Nitrate including associated water	Suirate		
								•			
	Annual, Design										
	value = 50										
L		From CMB monthly analysis Feb 2000 to Dec 2000, adding January 2001 episode for chemistry	From CMB	From CMB	From CMB		From CMB minus estimated Organic Carbon from other sources	From CMB	From CMB	From CMB, if present	Unaccounted mass
2		equivalent to annual design value				Vegetative Burning =30%	Carbon from other sources				from CMB, if any.
3 <u>L</u>		50.00		4.60	0.70	2.25	5.25	12.00	2.60	0.00	3.1
L		Portion not included in rollback analysis, removed prior to rollback as not subject to local control, added	see background sheet for		d, 0, no natural background transport estimated at 0		see background sheet for numerical estimate and episode adjustment.	see background sheet for numerical estimate and episode adjustment.	see background sheet for numerical estimate and episode	100% because marine	background estimate at maximum, no
ľ		back to projected future concentrations	adjustment. Removed prior to	transport commuted at	a anoport commuted at o	Removed prior to rollback as not	Removed prior to rollback as not	Removed prior to rollback as not	adjustment. Removed prior to		additional background
			rollback as not subject to local control, added back to projected			subject to local control, added back to projected future concentrations.	subject to local control, added back to projected future concentrations.	subject to local control, added back to projected future concentrations	rollback as not subject to local control, added back to		estimate for unexplained mass
			future concentrations			Includes biogenic emissions.	Includes wildfires and biogenic.	projected ratare concentrations	projected future concentrations		инохранной насо
						= 20%	=20% + 10%				
5	INE 2	8.03	3 4.0	0.0	0.0	0.5	1.6	1.0	1.0		
	ine 3 Net for Rollback	Net for Rollback, default percentages adjustable for		5.5	5.5	0.0		Net for non-linear rollback, default	1.0	Removed entirely from	
6		episode characteristics, applicable to all columns except as indicated.			1			percentages adjustable for episode characteristics		rollback, added back to result	
7 L		41.98		4.6	0.7	1.8	3.7	11.0	1.6	0.0	3.1
	ine4 Local Contribution PM2.5-PM10 Area of Influence	Source contribution from smallest area of influence,	70%PM10 50%PM2.5	70%PM10 50%PM2.8 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net	70%PM10 50%PM2.5 of net, non-linear rollback	70%PM10 50%PM2.5 of net	\ /	70%PM10 50%PM2.5 of net
<u> </u>		representative of large particle primary source area, includes all PM size emissions in the area - Rolled	of net	orner	or net	ornet	or net	of flet, flori-lifear foliback	or net	/	or net
		back against local area of influence emission estimates								\ /	
8 9		24.85	10.9	2.3	0.5	0.9	1.8	5.5	0.8	- \ /	2.2
L	ine5 Local Contribution Area of Influence	Rolled back against local PM2.5 area of influence	15%PM10 30%PM2.5	15%PM10 30%PM2.5		15%PM10 30%PM2.5	15%PM10 30%PM2.5	15%PM10 30%PM2.5 non-linear	15%PM10 30%PM2.5	† \ /	15%PM10 30%PM2.5
C	of PM2.5	emission estimates - episode specific adjustments based on meteorology and episode duration						rollback		\ /	
10		based on meteorology and episode duration								Y	
	INE 5	9.70		1.4	0.1	0.54	1.1	3.3	0.5	_ /\	0.5
<mark>'</mark>	ine6 Sub regional Contribution	Rolled back against specified County(ies) emission estimates - episode specific adjustments based on	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5	10%PM10 15%PM2.5 non-linear rollback	10%PM10 15%PM2.5	/ \	10%PM10 15%PM2.5
		meteorology and episode duration								/ \	
12 13	INE 6	5.33	3 1.6	0.7	0.1	0.27	0.6	1.65	0.24	- / \	0.3
	ine7 Regional Contribution	Rolled back against Valleywide emission estimates -		5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5	5%PM10 5%PM2.5 non-linear rollback		- /	5%PM10 5%PM2.5
14		episode specific adjustments based on meteorology and episode duration								/	
15	INE 7	2.10	0.8	0.2	0.0	0.09	0.2	0.55	0.08	-/	0.2
F		Based upon appropriate seasonal or annual	PM10 paved roads+ PM10 unpaved roads+	PM10, TOG & CO onro mobile+	Tire and brake wear as	Total TOG minus motor vehicle, OC may also include a small portion of	PM10 & CO residential burning PM10 & CO waste burning and	Total E.I. NOx (+ bacterial soil NOx	Total SOx	None, natural emission	Total PM10
		inventory		PM10, TOG & CO 860	predicted by EMFAC2002	otherwise unassigned elemental	disposal	estimate removed as natural background)		from the ocean, bay and delta waters	
				offroad equipment PM10, TOG & CO 870		carbon PM10 & CO Area, Stationary	PM10 cooking PM10 & CO fires				
				farm equipment		CO presumed to add minimal mass					
				CO presumed to add minimal mass							
16 17	999 Emissions Inventory	(area of influence emissions inventory, each on a se		_			1				
18	PM10	L1= Area 3	7.236852297		0.270246847	1.54732371	2.946320228	3			15.67865618
19		L2= Areas 3,4	26.02510179		0.37548458		5.732736172	2			39.92145356
21		Sr= Fresno, Madera R= SJV	74.4504 230.9463		0.511		10.4843 34.9152				94.6839 305.5217
22	NOx	L1= Area 3						53.21489079	9		
23		L2= Areas 3,4 Sr= Fresno, Madera						88.61773631 144.7763			
18 19 20 21 22 23 24 25 26 27		R= SJV						565.19			
26	TOG	L1= Area 3 L2= Areas 3,4		22.70656 33.4707		132.7691237 257.8874576					
28		Sr= Fresno, Madera		58.26		396.7168					
29		R= SJV		205.97		1241.6439					
28 29 30 31	SOx	L1= Area 3 L2= Areas 3.4							3.438823609 5.665348981		
32		Sr= Fresno, Madera							9.0772	2	
33		R= SJV	<u> </u>						30.2452	2	

	A	В	С	D	Е	F	G	Н	I	J	K	L	M
	Fresno -	General Note	Geologic and Construction	Mobile Exh	naust	Tire and Brake Wear	Organic C	arbon	Vegetative Burning	Ammonium	Ammonium	Marine	Unassigned
										Nitrate	Sulfate		1
	Drummond,									including associated water			
	Annual, Design												
	value = 50												
133	2010-2011 Emissions Inventory												
134	PM10 2010 El without new controls	L1= Area 3	8.129557667	1.44348865		0.367960339	1.747683078		3.262499732				17.31537711
135		L2= Areas 3,4	29.27326116	2.15521975		0.543853899	3.283480261		6.107828372				44.15866903
136 137		Sr= Fresno, Madera	83.727			0.746828157	6.2618		10.8882				104.7058
137		R= SJV	255.0794			2.63	27.9931		35.1798				331.6046
138	PM10 2010 EI with new controls	L1= Area 3	6.809440309			0.367960339	1.5244012		2.650942087				15.31076142
139		L2= Areas 3,4	24.51972576			0.543853899	2.863986791		4.962912068				37.05429637
140		Sr= Fresno, Madera	70.131	3.68542395		0.746828157	5.4618		8.8472				84.47342395
141		R= SJV	205.8304	12.8523		2.63	26.3051		29.2898				265.2426
142	NOx 2010 EI without new controls	L1= Area 3								34.57241458			
143 144 145		L2= Areas 3,4								62.07171354 103.4162			
144		Sr= Fresno, Madera R= SJV								103.4162 401.6368			
145	NOv 2010 El with now controls	R= SJV L1= Area 3								401.6368 31.73589191			
147	NOx 2010 EI with new controls	L1= Area 3 L2= Areas 3,4								56.97898788			
148		Sr= Fresno, Madera								94.93133136			
149		R= SJV								364.0558			
150	TOG 2010 EI without new controls	L1= Area 3		11	.5234286			156.7815607		304.0338			
151	100 2010 Et without new controls	L2= Areas 3,4			.8329166			304.4959518					
152		Sr= Fresno, Madera			31.9684			468.3626					
152 153		R= SJV			111.1259			1484.1355					
154	TOG 2010 EI with new controls	L1= Area 3			.5234286			156.7815607					
155	100 Loto Li martion controlo	L2= Areas 3,4			.8329166			304.4959518					
155 156		Sr= Fresno, Madera			31.9684			468.3626					
157		R= SJV			111.1259			1458.6195					
158	SOx 2010 EI without new controls	L1= Area 3									4.027627725		
159		L2= Areas 3,4									6.605602158		
160		Sr= Fresno, Madera									10.6469		
161		R= SJV									33.341		
162	SOx 2010 El with new controls	L1= Area 3									3.749205461		
163		L2= Areas 3,4									6.148969412		1
164		Sr= Fresno, Madera									9.9109		1
165		R= SJV									27.083		
210													1
211	2010-2011 Rollback Projection												-
212	Local Contribution PM2.5-PM10 Area of Influence	=(2010 L1/1999 L1) * LINE 4	12.2	1.1	0.6	0.7	0.5	0.5	2.0	4.2	0.9		2.4
213	PM2.5	=(2010 L2/1999 L2) * LINE 5	2.6	0.7	0.4	0.2	0.3	0.3	1.2	2.6	0.6		0.5
214	Sub regional Contribution	=(2010 Sr1/1999 Sr2) * LINE 6	1.7	0.3	0.2	0.1	0.2	0.2	0.6	1.3	0.3		0.3
215	Regional Contribution	=(2010 R/1999 R) * LINE 7	0.9		0.1	0.0	0.1	0.1	0.2	0.4			0.2
216	+ Natural Background contribution	= LINE 2	4.0			0.0	0.5		1.6	1.0			0.0
217	2010-2011 projected Annual Result	49.71	21.4		1.2		1.5	1.1		9.6	2.9	0.0	
	2010-2011 Rollback Projection with additional controls												
	Local Contribution PM2.5-PM10 Area of Influence	=(2010 L1/1999 L1) * LINE 4	10.2	1.0	0.6	0.7	0.4	0.5	1.7	4.0	0.9		2.1
		=(2010 L2/1999 L2) * LINE 5	2.2	0.6	0.4	0.2	0.3	0.3	1.0	2.5	0.5		0.4
221	Sub regional Contribution	=(2010 Sr1/1999 Sr2) * LINE 6	1.5	0.3	0.2	0.1	0.1	0.2	0.5	1.3	0.3		0.3
222	Regional Contribution	=(2010 R/1999 R) * LINE 7	0.7		0.1	0.0	0.0	0.1	0.2	0.4			0.1
223	+ Natural Background contribution	= LINE 2	4.0			0.0	0.5		1.6	1.0			0.0
224	2010-2011 projected Annual Result	44.90	18.6		1.2		1.3	1.1	4.8	9.2			3.0
225													1

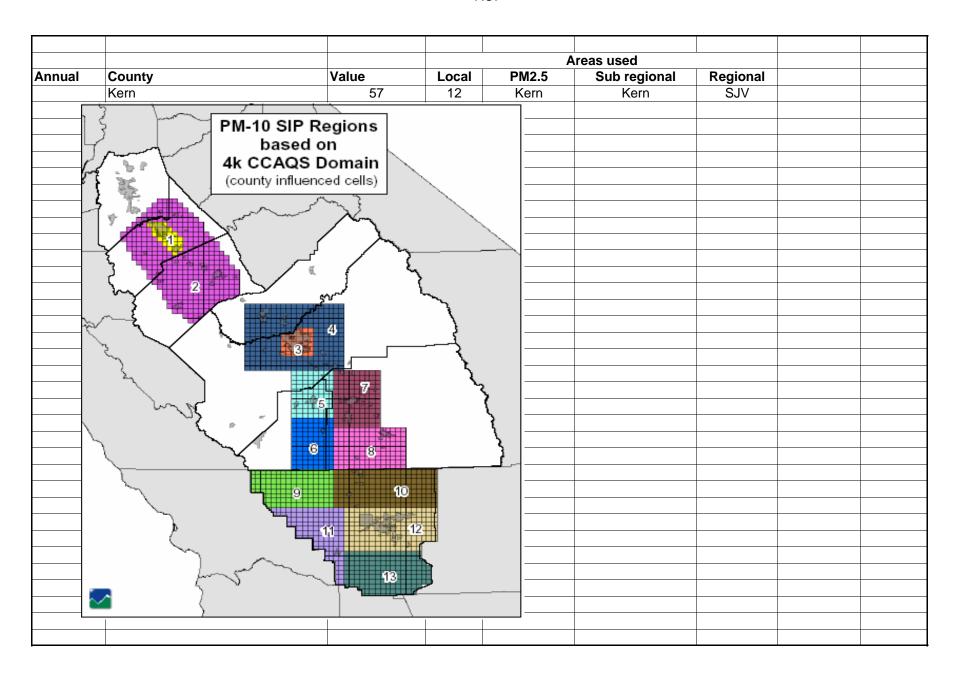
ANN	JAL Av	erage,	based	on CI	MB res	ults fo	or Feb	ruary to	Dec	embe	r 200	0 plu	us the	Jan 200	1 Epis	ode			
				Design	Sum of	Bu	rning	Motor Ve	hicle	Tire/B	rake	Sı	ulfate	Nitra	ate	Geolog	gical	Geological	·
SITEID	CONC	UCONC	PCMASS	Value	species			Mass		Mass		Mass		Mass		Mass		Profile	Unassigned
BGS	57.7	3.6	98.5	57.0	55.6	6.3	2.3	3.6	2.4	1.1	1.2	3.0	0.3	14.9	1.3	26.7	5.8	FDKERANN	1.4
FSD	49.5	3.2	98.4	50.0	46.9	7.5	2.4	4.6	2.8	0.7	0.7	2.6	0.3	12.0	1.1	19.5	3.3	FDFSDANN	3.1
HAN	51.5	3.3	104.1	53.0	52.9	6.6	2.0	4.0	2.3	0.5	0.7	3.0	0.3	15.7	1.4	23.2	4.2	FDHANANN	0.1
vcs	52.5	3.3	99.6	54.0	51.8	6.7	2.5	4.0	2.5	0.5	1.0	3.1	0.3	15.9	1.5	21.7	3.8	FDVCSANN	2.2
This an	alysis prov	ides a sea	asonally ac	ljusted a	nnual ave	rage, us	ing the J	anuary epis	ode to	reflect th	e dom	inant w	vinter che	mistry.					

Bakers	field Gold	len State	Monthly				Bur	ning	Motor '	Vehicle	Tire/E	Brake	Su	lfate	Nit	rate	G	eological	
SITEID	DATE	CONC	UCONC	PCMAS	RSQ	CHISQ	Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc	
BGS	1/1/01	205	10.3	93.6	1.0	0.9	23.3	6.3	6.7	4.7	1.3	1.7	7.0	0.7	95.4	7.8	58.2	9.6	
BGS	Feb	24.4	1.9	96.4	1.0	0.7	4.1	2.3	1.7	1.3	0.6	0.6	1.2	0.1	5.1	0.6	10.9	3.2	
BGS	Mar	22.2	2.1	107.7	1.0	1.0	2.1	2.2	2.1	1.4	0.6	0.6	1.9	0.2	5.5	0.6	11.7	3.1	
BGS	Apr	31.5	2.4	107.8	1.0	0.4	6.3	3.2	2.1	1.7	0.5	0.7	3.0	0.3	4.9	0.6	17.3	4.6	
BGS	May*	34.6	2.5	118.5	1.0	0.5	0.3	0.4	5.3	2.6			3.1	0.3	4.5	0.5	27.8		
BGS	Jun*	41.3	2.7	102.7	1.0	0.6	0.9	0.4	5.1	2.6			3.8	0.3	3.1	0.4	29.4		
BGS	Jul*	37.0	2.6	101.3	0.9	2.2	7.1	1.1	0.2	1.4	2.4			0.2		0.3	23.4		
BGS	Aug*	43.5	2.6	97.8	1.0	1.2	4.1	0.8	2.2	1.9				0.3		0.4	30.2		
	Sep*	78.6	4.7	98.3	0.9	1.2	3.5	1.4	4.5	3.3	0.8			0.4	3.6	0.4	61.9		
BGS	Oct*	36.1	2.8	83.9		1.0	3.5	0.7	1.6	1.3	1.4			0.2	5.2	0.6	16.7		
	Nov	48.4	2.9	86.3		0.4	7.9	3.4	4.6	2.7	0.6			0.2	14.0	1.2	12.3		
BGS	Dec	90.2	5.1	87.4	1.0	0.6	12.5	5.1	7.0	4.2	2.1	1.2	4.3	0.4	32.2	2.7	20.9	5.4	
Min		22.2	1.9	83.9	0.9	0.4	0.3	0.4	0.2	1.3	0.5	0.6	1.2	0.1	2.2	0.3	10.9	3.1	
Avg		57.7	3.6	98.5	1.0	0.9	6.3	2.3	3.6	2.4	1.1	1.2	3.0	0.3	14.9	1.3	26.7	5.8	
Max		205.0	10.3	118.5	1.0	2.2	23.3	6.3	7.0	4.7	2.4	2.7	7.0	0.7	95.4	7.8	61.9	12.5	
	1																		
		nd Month								Vehicle	Tire/E			lfate		rate		eological	
SITEID	DATE	CONC	UCONC	PCMAS		CHISQ	Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc	
SITEID FSD	DATE 1/1/01	CONC 186	UCONC 9.4	87.9	1.0	1.1	Mass 40.1	Unc 11.3	Mass 18.5	Unc 9.6	Mass 2.5	Unc 1.5	Mass 5.0	Unc 0.7	Mass 62.4	Unc 5.1	Mass 35.1	Unc 6.8	
SITEID FSD FSD	DATE 1/1/01 Feb	186 27.0	UCONC 9.4 2.1	87.9 97.3	1.0 1.0	1.1 0.7	Mass 40.1 5.7	Unc 11.3 2.5	Mass 18.5 3.1	Unc 9.6 1.8	Mass 2.5 0.3	Unc 1.5 0.4	Mass 5.0 1.1	Unc 0.7 0.2	Mass 62.4 7.7	Unc 5.1 0.8	Mass 35.1 8.3	Unc 6.8 2.1	
SITEID FSD FSD FSD	DATE 1/1/01 Feb Mar	186 27.0 23.9	UCONC 9.4 2.1 2.1	87.9 97.3 116.0	1.0 1.0 1.0	1.1 0.7 0.7	Mass 40.1 5.7 4.6	Unc 11.3 2.5 2.4	Mass 18.5 3.1 3.1	9.6 1.8 1.8	Mass 2.5 0.3 0.1	Unc 1.5 0.4 0.4	5.0 1.1 1.8	0.7 0.2 0.2	Mass 62.4 7.7 8.2	Unc 5.1 0.8 0.9	Mass 35.1 8.3 9.9	Unc 6.8 2.1 2.3	
SITEID FSD FSD FSD FSD	DATE 1/1/01 Feb Mar Apr	27.0 23.9 24.8	UCONC 9.4 2.1 2.1 2.2	87.9 97.3 116.0 112.1	1.0 1.0 1.0 1.0	1.1 0.7 0.7 0.6	Mass 40.1 5.7 4.6 3.4	Unc 11.3 2.5 2.4 2.7	Mass 18.5 3.1 3.1 2.4	9.6 1.8 1.8 1.6	Mass 2.5 0.3 0.1	Unc 1.5 0.4 0.4	5.0 1.1 1.8 2.4	0.7 0.2 0.2 0.2	Mass 62.4 7.7 8.2 5.0	Unc 5.1 0.8 0.9 0.5	Mass 35.1 8.3 9.9 14.4	Unc 6.8 2.1 2.3 3.0	
SITEID FSD FSD FSD FSD FSD	DATE 1/1/01 Feb Mar Apr May**	27.0 23.9 24.8 20.0	9.4 2.1 2.1 2.2 2.2	87.9 97.3 116.0 112.1 99.5	1.0 1.0 1.0 1.0	1.1 0.7 0.7 0.6 0.6	Mass 40.1 5.7 4.6 3.4 0.34456	11.3 2.5 2.4 2.7 0.32946	Mass 18.5 3.1 3.1 2.4 2.1	9.6 1.8 1.8 1.6 1.4	2.5 0.3 0.1 0.2	Unc 1.5 0.4 0.4 0.5	5.0 1.1 1.8 2.4 2.32687	Unc 0.7 0.2 0.2 0.2 0.2 0.22637	Mass 62.4 7.7 8.2 5.0 2.47743	Unc 5.1 0.8 0.9 0.5 0.32112	Mass 35.1 8.3 9.9 14.4 12.63	Unc 6.8 2.1 2.3 3.0 1.7055	
SITEID FSD FSD FSD FSD FSD FSD FSD	DATE 1/1/01 Feb Mar Apr May** Jun*	27.0 23.9 24.8 20.0 34.1	UCONC 9.4 2.1 2.1 2.2 2.1 2.5	87.9 97.3 116.0 112.1 99.5 105.8	1.0 1.0 1.0 1.0 1.0	1.1 0.7 0.7 0.6 0.6 1.0	Mass 40.1 5.7 4.6 3.4 0.34456 1.9	11.3 2.5 2.4 2.7 0.32946 0.4	Mass 18.5 3.1 3.1 2.4 2.1 3.8	9.6 1.8 1.8 1.6 1.4 2.3	2.5 0.3 0.1 0.2	Unc 1.5 0.4 0.4 0.5	5.0 1.1 1.8 2.4 2.32687 4.2	Unc 0.7 0.2 0.2 0.2 0.22637 0.4	Mass 62.4 7.7 8.2 5.0 2.47743 3.6	Unc 5.1 0.8 0.9 0.5 0.32112 0.4	Mass 35.1 8.3 9.9 14.4 12.63 22.5	Unc 6.8 2.1 2.3 3.0 1.7055 3.8	
SITEID FSD FSD FSD FSD FSD FSD FSD FSD	DATE 1/1/01 Feb Mar Apr May** Jun* Jul*	27.0 23.9 24.8 20.0 34.1 26.4	UCONC 9.4 2.1 2.1 2.2 2.1 2.5 2.3	87.9 97.3 116.0 112.1 99.5 105.8 100.6	1.0 1.0 1.0 1.0 1.0 1.0	1.1 0.7 0.7 0.6 0.6 1.0 0.6	40.1 5.7 4.6 3.4 0.34456 1.9 1.0	Unc 11.3 2.5 2.4 2.7 0.32946 0.4 0.4	Mass 18.5 3.1 3.1 2.4 2.1 3.8 1.5	9.6 1.8 1.8 1.6 1.4 2.3 1.3	Mass 2.5 0.3 0.1 0.2	Unc 1.5 0.4 0.4 0.5	5.0 1.1 1.8 2.4 2.32687 4.2 1.7	Unc 0.7 0.2 0.2 0.2 0.2637 0.4 0.2	Mass 62.4 7.7 8.2 5.0 2.47743 3.6 2.7	Unc 5.1 0.8 0.9 0.5 0.32112 0.4 0.3	Mass 35.1 8.3 9.9 14.4 12.63 22.5 19.6	Unc 6.8 2.1 2.3 3.0 1.7055 3.8 2.2	
SITEID FSD FSD FSD FSD FSD FSD FSD FSD FSD	DATE 1/1/01 Feb Mar Apr May** Jun* Jul* Aug*	27.0 23.9 24.8 20.0 34.1 26.4 38.2	UCONC 9.4 2.1 2.1 2.2 2.1 2.5 2.3 2.5	87.9 97.3 116.0 112.1 99.5 105.8 100.6 90.2	1.0 1.0 1.0 1.0 1.0 1.0 1.0	1.1 0.7 0.7 0.6 0.6 1.0 0.6 2.7	Mass 40.1 5.7 4.6 3.4 0.34456 1.9 1.0 3.8	Unc 11.3 2.5 2.4 2.7 0.32946 0.4 0.4 0.7	Mass 18.5 3.1 3.1 2.4 2.1 3.8 1.5 0.9	9.6 1.8 1.8 1.6 1.4 2.3 1.3	Mass 2.5 0.3 0.1 0.2 0.0	Unc 1.5 0.4 0.4 0.5 0.6	5.0 1.1 1.8 2.4 2.32687 4.2 1.7 2.0	Unc 0.7 0.2 0.2 0.2 0.2637 0.4 0.2 0.3	Mass 62.4 7.7 8.2 5.0 2.47743 3.6 2.7 3.3	Unc 5.1 0.8 0.9 0.5 0.32112 0.4 0.3 0.4	Mass 35.1 8.3 9.9 14.4 12.63 22.5 19.6 23.1	Unc 6.8 2.1 2.3 3.0 1.7055 3.8 2.2 4.3	
SITEID FSD FSD FSD FSD FSD FSD FSD FSD FSD FS	DATE 1/1/01 Feb Mar Apr May** Jun* Jul* Aug* Sep*	27.0 23.9 24.8 20.0 34.1 26.4 38.2 56.7	UCONC 9.4 2.1 2.1 2.2 2.1 2.5 2.3 2.5 3.3	87.9 97.3 116.0 112.1 99.5 105.8 100.6 90.2 92.8	1.0 1.0 1.0 1.0 1.0 1.0 1.0 0.9	1.1 0.7 0.7 0.6 0.6 1.0 0.6 2.7	Mass 40.1 5.7 4.6 3.4 0.34456 1.9 1.0 3.8 1.5	Unc 11.3 2.5 2.4 2.7 0.32946 0.4 0.4 0.7 0.6	Mass 18.5 3.1 3.1 2.4 2.1 3.8 1.5 0.9 3.4	9.6 1.8 1.6 1.4 2.3 1.3 1.5 2.5	Mass 2.5 0.3 0.1 0.2 0.0	Unc 1.5 0.4 0.4 0.5 0.6	5.0 1.1 1.8 2.4 2.32687 4.2 1.7 2.0 2.6	Unc 0.7 0.2 0.2 0.2 0.2637 0.4 0.2 0.3 0.4	Mass 62.4 7.7 8.2 5.0 2.47743 3.6 2.7 3.3 3.6	Unc 5.1 0.8 0.9 0.5 0.32112 0.4 0.3 0.4 0.4	Mass 35.1 8.3 9.9 14.4 12.63 22.5 19.6 23.1 40.6	Unc 6.8 2.1 2.3 3.0 1.7055 3.8 2.2 4.3 6.0	
SITEID FSD FSD FSD FSD FSD FSD FSD FSD FSD FS	DATE 1/1/01 Feb Mar Apr May** Jun* Jul* Aug* Sep* Oct*	27.0 23.9 24.8 20.0 34.1 26.4 38.2 56.7 50.7	UCONC 9.4 2.1 2.1 2.2 2.1 2.5 2.3 2.5 3.3 3.4	87.9 97.3 116.0 112.1 99.5 105.8 100.6 90.2 92.8 93.5	1.0 1.0 1.0 1.0 1.0 1.0 1.0 0.9 1.0	1.1 0.7 0.7 0.6 0.6 1.0 0.6 2.7 0.9	Mass 40.1 5.7 4.6 3.4 0.34456 1.9 1.0 3.8 1.5 1.8	Unc 11.3 2.5 2.4 2.7 0.32946 0.4 0.4 0.7 0.6 0.4	Mass 18.5 3.1 3.1 2.4 2.1 3.8 1.5 0.9 3.4 4.5	9.6 1.8 1.8 1.6 1.4 2.3 1.3 1.5 2.5	Mass 2.5 0.3 0.1 0.2 0.0 1.4 0.9	Unc 1.5 0.4 0.4 0.5 0.6 0.9	5.0 1.1 1.8 2.4 2.32687 4.2 1.7 2.0 2.6 2.2	Unc 0.7 0.2 0.2 0.2 0.2637 0.4 0.2 0.3 0.4	Mass 62.4 7.7 8.2 5.0 2.47743 3.6 2.7 3.3 3.6 8.4	Unc 5.1 0.8 0.9 0.5 0.32112 0.4 0.3 0.4 0.4 0.8	Mass 35.1 8.3 9.9 14.4 12.63 22.5 19.6 23.1 40.6 30.6	Unc 6.8 2.1 2.3 3.0 1.7055 3.8 2.2 4.3 6.0 3.3	
SITEID FSD FSD FSD FSD FSD FSD FSD FSD FSD FS	DATE 1/1/01 Feb Mar Apr May** Jun* Jul* Aug* Sep* Oct* Nov	27.0 23.9 24.8 20.0 34.1 26.4 38.2 56.7 50.7 40.5	UCONC 9.4 2.1 2.1 2.2 2.1 2.5 2.3 2.5 3.3 3.4 2.6	87.9 97.3 116.0 112.1 99.5 105.8 100.6 90.2 92.8 93.5 95.7	1.0 1.0 1.0 1.0 1.0 1.0 1.0 0.9 1.0	1.1 0.7 0.6 0.6 1.0 0.6 2.7 0.9 0.5	Mass 40.1 5.7 4.6 3.4 0.34456 1.9 1.0 3.8 1.5 1.8	Unc 11.3 2.5 2.4 2.7 0.32946 0.4 0.7 0.6 0.4 3.3	Mass 18.5 3.1 3.1 2.4 2.1 3.8 1.5 0.9 3.4 4.5 4.5	Unc 9.6 1.8 1.8 1.6 1.4 2.3 1.3 1.5 2.5 2.6 2.7	Mass 2.5 0.3 0.1 0.2 0.0 1.4 0.9 0.4	Unc 1.5 0.4 0.4 0.5 0.6 0.9 1.0	Mass 5.0 1.1 1.8 2.4 2.32687 4.2 1.7 2.0 2.6 2.2 2.1	Unc 0.7 0.2 0.2 0.2 0.2637 0.4 0.2 0.3 0.4 0.3	Mass 62.4 7.7 8.2 5.0 2.47743 3.6 2.7 3.3 3.6 8.4 13.1	Unc 5.1 0.8 0.9 0.5 0.32112 0.4 0.3 0.4 0.4 0.8 1.2	Mass 35.1 8.3 9.9 14.4 12.63 22.5 19.6 23.1 40.6 30.6 6.8	Unc 6.8 2.1 2.3 3.0 1.7055 3.8 2.2 4.3 6.0 3.3 1.8	
SITEID FSD FSD FSD FSD FSD FSD FSD FSD FSD FS	DATE 1/1/01 Feb Mar Apr May** Jun* Jul* Aug* Sep* Oct*	27.0 23.9 24.8 20.0 34.1 26.4 38.2 56.7 50.7	UCONC 9.4 2.1 2.1 2.2 2.1 2.5 2.3 2.5 3.3 3.4	87.9 97.3 116.0 112.1 99.5 105.8 100.6 90.2 92.8 93.5	1.0 1.0 1.0 1.0 1.0 1.0 1.0 0.9 1.0	1.1 0.7 0.7 0.6 0.6 1.0 0.6 2.7 0.9	Mass 40.1 5.7 4.6 3.4 0.34456 1.9 1.0 3.8 1.5 1.8	Unc 11.3 2.5 2.4 2.7 0.32946 0.4 0.4 0.7 0.6 0.4	Mass 18.5 3.1 3.1 2.4 2.1 3.8 1.5 0.9 3.4 4.5	9.6 1.8 1.8 1.6 1.4 2.3 1.3 1.5 2.5	Mass 2.5 0.3 0.1 0.2 0.0 1.4 0.9 0.4	Unc 1.5 0.4 0.4 0.5 0.6 0.9 1.0	Mass 5.0 1.1 1.8 2.4 2.32687 4.2 1.7 2.0 2.6 2.2 2.1	Unc 0.7 0.2 0.2 0.2 0.2637 0.4 0.2 0.3 0.4	Mass 62.4 7.7 8.2 5.0 2.47743 3.6 2.7 3.3 3.6 8.4	Unc 5.1 0.8 0.9 0.5 0.32112 0.4 0.3 0.4 0.4 0.8	Mass 35.1 8.3 9.9 14.4 12.63 22.5 19.6 23.1 40.6 30.6	Unc 6.8 2.1 2.3 3.0 1.7055 3.8 2.2 4.3 6.0 3.3 1.8	
SITEID FSD FSD FSD FSD FSD FSD FSD FSD FSD FS	DATE 1/1/01 Feb Mar Apr May** Jun* Jul* Aug* Sep* Oct* Nov	27.0 23.9 24.8 20.0 34.1 26.4 38.2 56.7 50.7 40.5 65.8	UCONC 9.4 2.1 2.1 2.2 2.1 2.5 2.3 2.5 3.3 3.4 2.6 3.9	87.9 97.3 116.0 112.1 99.5 105.8 100.6 90.2 92.8 93.5 95.7 89.7	1.0 1.0 1.0 1.0 1.0 1.0 0.9 1.0 1.0	1.1 0.7 0.6 0.6 1.0 0.6 2.7 0.9 0.5 0.4	Mass 40.1 5.7 4.6 3.4 0.34456 1.9 1.0 3.8 1.5 1.8 11.9 13.7	Unc 11.3 2.5 2.4 2.7 0.32946 0.4 0.7 0.6 0.4 3.3 4.3	Mass 18.5 3.1 3.1 2.4 2.1 3.8 1.5 0.9 3.4 4.5 4.5 7.3	Unc 9.6 1.8 1.8 1.6 1.4 2.3 1.5 2.5 2.6 2.7 3.8	0.0 0.4 0.8 0.8 0.4 0.8	Unc 1.5 0.4 0.4 0.5 0.6 0.9 1.0 0.4 0.6	Mass 5.0 1.1 1.8 2.4 2.32687 4.2 1.7 2.0 2.6 2.2 2.1 3.2	Unc 0.7 0.2 0.2 0.2 0.2637 0.4 0.2 0.3 0.4 0.3 0.4 0.3 0.2	Mass 62.4 7.7 8.2 5.0 2.47743 3.6 2.7 3.3 3.6 8.4 13.1 23.4	Unc 5.1 0.8 0.9 0.5 0.32112 0.4 0.3 0.4 0.4 0.8 1.2 2.0	Mass 35.1 8.3 9.9 14.4 12.63 22.5 19.6 23.1 40.6 30.6 6.8 10.6	Unc 6.8 2.1 2.3 3.0 1.7055 3.8 2.2 4.3 6.0 3.3 1.8 2.6	
SITEID FSD FSD FSD FSD FSD FSD FSD FSD FSD FS	DATE 1/1/01 Feb Mar Apr May** Jun* Jul* Aug* Sep* Oct* Nov	27.0 23.9 24.8 20.0 34.1 26.4 38.2 56.7 50.7 40.5 65.8	UCONC 9.4 2.1 2.1 2.2 2.1 2.5 2.3 2.5 3.3 3.4 2.6 3.9	87.9 97.3 116.0 112.1 99.5 105.8 100.6 90.2 92.8 93.5 95.7 89.7	1.0 1.0 1.0 1.0 1.0 1.0 0.9 1.0 1.0 1.0	1.1 0.7 0.6 0.6 1.0 0.6 2.7 0.9 0.5 0.4	Mass 40.1 5.7 4.6 3.4 0.34456 1.9 1.0 3.8 1.5 1.8 11.9 13.7 0.3	Unc 11.3 2.5 2.4 2.7 0.32946 0.4 0.7 0.6 0.4 3.3 4.3	Mass 18.5 3.1 3.1 2.4 2.1 3.8 1.5 0.9 3.4 4.5 4.5 7.3	Unc 9.6 1.8 1.8 1.6 1.4 2.3 1.3 1.5 2.5 2.6 2.7 3.8	0.0 Mass 2.5 0.3 0.1 0.2 0.0 1.4 0.9 0.4 0.8 0.0	Unc 1.5 0.4 0.4 0.5 0.6 0.9 1.0 0.4 0.6	Mass 5.0 1.1 1.8 2.4 2.32687 4.2 1.7 2.0 2.6 2.2 2.1 3.2	Unc 0.7 0.2 0.2 0.2 0.2637 0.4 0.2 0.3 0.4 0.3 0.4 0.3 0.2	Mass 62.4 7.7 8.2 5.0 2.47743 3.6 2.7 3.3 3.6 8.4 13.1 23.4	Unc 5.1 0.8 0.9 0.5 0.32112 0.4 0.3 0.4 0.4 0.8 1.2 2.0	Mass 35.1 8.3 9.9 14.4 12.63 22.5 19.6 23.1 40.6 30.6 6.8 10.6	Unc 6.8 2.1 2.3 3.0 1.7055 3.8 2.2 4.3 6.0 3.3 1.8 2.6	
SITEID FSD FSD FSD FSD FSD FSD FSD FSD FSD FS	DATE 1/1/01 Feb Mar Apr May** Jun* Jul* Aug* Sep* Oct* Nov	27.0 23.9 24.8 20.0 34.1 26.4 38.2 56.7 50.7 40.5 65.8 20.0 49.5	UCONC 9.4 2.1 2.2 2.1 2.5 2.3 2.5 3.3 3.4 2.6 3.9	87.9 97.3 116.0 112.1 99.5 105.8 100.6 90.2 92.8 93.5 95.7 89.7 87.9 98.4	1.0 1.0 1.0 1.0 1.0 1.0 0.9 1.0 1.0 1.0	1.1 0.7 0.6 0.6 1.0 0.6 2.7 0.9 0.5 0.4 0.8	Mass 40.1 5.7 4.6 3.4 0.34456 1.9 1.0 3.8 1.5 1.8 11.9 13.7 0.3 7.5	Unc 11.3 2.5 2.4 2.7 0.32946 0.4 0.7 0.6 0.4 3.3 4.3	Mass 18.5 3.1 3.1 2.4 2.1 3.8 1.5 0.9 3.4 4.5 7.3 0.9 4.6	Unc 9.6 1.8 1.8 1.6 1.4 2.3 1.5 2.5 2.6 2.7 3.8 1.3 2.8	0.0 0.0 0.7 0.0 0.7 0.0 0.7 0.0 0.7 0.0 0.7	Unc 1.5 0.4 0.4 0.5 0.6 0.9 1.0 0.4 0.6 0.7	Mass 5.0 1.1 1.8 2.4 2.32687 4.2 1.7 2.0 2.6 2.2 2.1 3.2	Unc 0.7 0.2 0.2 0.2 0.22637 0.4 0.2 0.3 0.4 0.3 0.2 0.3 0.2 0.3	Mass 62.4 7.7 8.2 5.0 2.47743 3.6 2.7 3.3 3.6 8.4 13.1 23.4 2.5 12.0	Unc 5.1 0.8 0.9 0.5 0.32112 0.4 0.3 0.4 0.4 0.8 1.2 2.0	Mass 35.1 8.3 9.9 14.4 12.63 22.5 19.6 23.1 40.6 6.8 10.6	Unc 6.8 2.1 2.3 3.0 1.7055 3.8 2.2 4.3 6.0 3.3 1.8 2.6 1.7 3.3	
FSD FSD FSD FSD FSD FSD FSD FSD FSD FSD	DATE 1/1/01 Feb Mar Apr May** Jun* Jul* Aug* Sep* Oct* Nov	27.0 23.9 24.8 20.0 34.1 26.4 38.2 56.7 50.7 40.5 65.8	UCONC 9.4 2.1 2.1 2.2 2.1 2.5 2.3 2.5 3.3 3.4 2.6 3.9	87.9 97.3 116.0 112.1 99.5 105.8 100.6 90.2 92.8 93.5 95.7 89.7	1.0 1.0 1.0 1.0 1.0 1.0 0.9 1.0 1.0 1.0	1.1 0.7 0.6 0.6 1.0 0.6 2.7 0.9 0.5 0.4	Mass 40.1 5.7 4.6 3.4 0.34456 1.9 1.0 3.8 1.5 1.8 11.9 13.7 0.3	Unc 11.3 2.5 2.4 2.7 0.32946 0.4 0.7 0.6 0.4 3.3 4.3	Mass 18.5 3.1 3.1 2.4 2.1 3.8 1.5 0.9 3.4 4.5 4.5 7.3	Unc 9.6 1.8 1.8 1.6 1.4 2.3 1.3 1.5 2.5 2.6 2.7 3.8	0.0 Mass 2.5 0.3 0.1 0.2 0.0 1.4 0.9 0.4 0.8 0.0	Unc 1.5 0.4 0.4 0.5 0.6 0.9 1.0 0.4 0.6	Mass 5.0 1.1 1.8 2.4 2.32687 4.2 1.7 2.0 2.6 2.2 2.1 3.2	Unc 0.7 0.2 0.2 0.2 0.2637 0.4 0.2 0.3 0.4 0.3 0.4 0.3 0.2	Mass 62.4 7.7 8.2 5.0 2.47743 3.6 2.7 3.3 3.6 8.4 13.1 23.4	Unc 5.1 0.8 0.9 0.5 0.32112 0.4 0.3 0.4 0.4 0.8 1.2 2.0	Mass 35.1 8.3 9.9 14.4 12.63 22.5 19.6 23.1 40.6 30.6 6.8 10.6	Unc 6.8 2.1 2.3 3.0 1.7055 3.8 2.2 4.3 6.0 3.3 1.8 2.6	

Hanfor	d Monthly							ning	Motor '	Vehicle	Tire/B	Brake	Su	lfate	Nit	trate	G	eological	
SITEID	DATE	CONC	UCONC	PCMAS	RSQ	CHISQ	Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc	Mass	Unc	
HAN	1/7/01	185	9.6	102.9	1.0	0.4	27.6	9.7	14.7	7.8	1.7	1.1	7.2	0.7	96.9	7.9	42.4	7.7	
HAN	Feb	20.0	1.8	105.0	0.9	0.5	5.0	1.7	1.4	1.0	0.0			0.2	8.6		4.6	1.3	
HAN	Mar	21.4	2.0	100.3	0.9	0.5	4.0	1.8	1.6	1.0	0.2	0.3	1.8	0.2	7.1	0.7	6.8	1.8	
HAN	Apr*	22.3	2.1	120.6	1.0	0.3	0.4	0.3	3.2	1.6			2.2	0.2	5.0	0.5	16.1	2.8	
HAN	May*	24.4	2.1	107.3	1.0	0.3	1.16725	0.35652	2.4	1.4			2.44716	0.22382	3.77466	0.44049	16.4	2.79498	
HAN	Jun*	31.3	2.5	107.9	1.0	0.4	3.2	0.5	2.4	1.6	0.2	0.6		0.3	4.1	0.5		4.1	
HAN	Jul*	38.7	2.6	107.9	0.9	0.7	3.6	0.6	2.7	1.6	0.2	0.7	3.4	0.3	5.6	0.6	26.3	4.7	
HAN	Aug*	43.3	2.6	103.7	0.9	0.5	4.2	0.6	1.9	1.5	0.3	0.8	2.0	0.2	2.7	0.4	33.8	5.7	
HAN	Sep*	70.5	4.0	105.3	0.9	0.5	2.5	0.8	4.3	2.7	0.5	1.2		0.4	5.0	-	58.8	8.8	
HAN	Oct*	51.8	3.4	90.9	1.0	0.3	1.0	0.5	3.7	2.2	0.2	0.8	2.4	0.3				5.8	
HAN	Nov	46.4	2.8	107.6	1.0	0.4	13.5	3.6	4.8	2.9	1.0	0.5		0.3				2.7	
HAN	Dec	62.8	3.6	89.4	1.0	0.5	12.4	3.4	4.4	2.5	0.9	0.5	3.7	0.4	23.9	2.1	10.7	2.8	
Min		20.0	1.8	89.4	0.9	0.3	0.4	0.3	1.4	1.0	0.0	0.3	1.4	0.2	2.7		4.6	1.3	
Avg		51.5	3.3	104.1	1.0	0.4	6.6	2.0	4.0	2.3	0.5	0.7	3.0	0.3	15.7		23.2	4.2	
Max		185.0	9.6	120.6	1.0	0.7	27.6	9.7	14.7	7.8	1.7	1.2	7.2	0.7	96.9	7.9	58.8	8.8	
	Church St									Vehicle	Tire/B			lfate		trate		eological	
SITEID				PCMAS		CHISQ					Mass						Mass		
	1/7/01	185	9.6	102.9	1.0	0.4	27.6	9.7	14.7	7.8	1.7	1.1	7.2	0.7	96.9	7.9	42.4	7.7	
VCS	Feb																		
VCS	+	25.0	2.1	99.8	1.0	0.5	5.3	2.1	2.0	1.3	0.0	0.5		0.1	9.0	1.0	7.6	1.9	
	Mar	27.5	2.1 2.2	99.8 102.9	1.0	0.5 1.0	5.3 4.8	2.1 2.2	2.0 2.9	1.3 1.7	0.0 0.1	0.5 0.5	2.1	0.1 0.2	9.0 10.0	1.0 0.9	7.6 8.4	1.9 1.9	
VCS	Apr	27.5 26.2	2.1 2.2 2.2	99.8 102.9 115.3	1.0 1.0	0.5 1.0 0.7	5.3 4.8 5.6	2.1 2.2 2.8	2.0 2.9 1.7	1.3 1.7 1.6	0.0	0.5 0.5	2.1 2.8	0.1 0.2 0.3	9.0 10.0 5.9	1.0 0.9 0.6	7.6 8.4 13.7	1.9 1.9 2.9	
VCS VCS	Apr May**	27.5 26.2 29.1	2.1 2.2 2.2 2.3	99.8 102.9 115.3 112.8	1.0 1.0 1.0	0.5 1.0 0.7 0.7	5.3 4.8 5.6 5.4	2.1 2.2 2.8 3.6	2.0 2.9 1.7 1.4	1.3 1.7 1.6 1.6	0.0 0.1	0.5 0.5	2.1 2.8 2.8	0.1 0.2 0.3 0.3	9.0 10.0 5.9 3.8	1.0 0.9 0.6 0.5	7.6 8.4 13.7 19.4	1.9 1.9 2.9 3.2	
VCS VCS VCS	Apr May** Jun*	27.5 26.2 29.1 42.0	2.1 2.2 2.2 2.3 2.7	99.8 102.9 115.3 112.8 106.1	1.0 1.0 1.0 1.0	0.5 1.0 0.7 0.7 0.7	5.3 4.8 5.6 5.4 0.8	2.1 2.2 2.8 3.6 0.4	2.0 2.9 1.7 1.4 4.9	1.3 1.7 1.6 1.6 2.7	0.0 0.1 0.6	0.5 0.5 0.6	2.1 2.8 2.8 5.4	0.1 0.2 0.3 0.3 0.5	9.0 10.0 5.9 3.8 5.2	1.0 0.9 0.6 0.5 0.6	7.6 8.4 13.7 19.4 28.2	1.9 1.9 2.9 3.2 3.9	
VCS VCS VCS VCS	Apr May** Jun* Jul*	27.5 26.2 29.1 42.0 34.7	2.1 2.2 2.2 2.3 2.7 2.5	99.8 102.9 115.3 112.8 106.1 107.8	1.0 1.0 1.0 1.0 0.9	0.5 1.0 0.7 0.7 0.7 1.4	5.3 4.8 5.6 5.4 0.8 3.7	2.1 2.2 2.8 3.6 0.4 0.6	2.0 2.9 1.7 1.4 4.9 1.8	1.3 1.7 1.6 1.6 2.7 1.7	0.0 0.1 0.6	0.5 0.5 0.6	2.1 2.8 2.8 5.4 2.9	0.1 0.2 0.3 0.3 0.5 0.3	9.0 10.0 5.9 3.8 5.2 4.9	1.0 0.9 0.6 0.5 0.6	7.6 8.4 13.7 19.4 28.2 23.7	1.9 1.9 2.9 3.2 3.9 3.8	
VCS VCS VCS VCS VCS	Apr May** Jun* Jul* Aug*	27.5 26.2 29.1 42.0 34.7 44.9	2.1 2.2 2.2 2.3 2.7 2.5 2.7	99.8 102.9 115.3 112.8 106.1 107.8 98.5	1.0 1.0 1.0 1.0 0.9 0.9	0.5 1.0 0.7 0.7 0.7 1.4 1.3	5.3 4.8 5.6 5.4 0.8 3.7 3.6	2.1 2.2 2.8 3.6 0.4 0.6 0.7	2.0 2.9 1.7 1.4 4.9 1.8	1.3 1.7 1.6 1.6 2.7 1.7	0.0 0.1 0.6 0.5 0.3	0.5 0.5 0.6 1.1 1.4	2.1 2.8 2.8 5.4 2.9 2.3	0.1 0.2 0.3 0.3 0.5 0.3	9.0 10.0 5.9 3.8 5.2 4.9	1.0 0.9 0.6 0.5 0.6 0.6	7.6 8.4 13.7 19.4 28.2 23.7 32.4	1.9 1.9 2.9 3.2 3.9 3.8 4.9	
VCS VCS VCS VCS VCS VCS	Apr May** Jun* Jul* Aug* Sep*	27.5 26.2 29.1 42.0 34.7 44.9 59.1	2.1 2.2 2.2 2.3 2.7 2.5 2.7 3.5	99.8 102.9 115.3 112.8 106.1 107.8 98.5 84.4	1.0 1.0 1.0 1.0 0.9 0.9	0.5 1.0 0.7 0.7 0.7 1.4 1.3 1.3	5.3 4.8 5.6 5.4 0.8 3.7 3.6 3.4	2.1 2.2 2.8 3.6 0.4 0.6 0.7 0.8	2.0 2.9 1.7 1.4 4.9 1.8 1.4 1.9	1.3 1.7 1.6 1.6 2.7 1.7 1.6 1.9	0.0 0.1 0.6 0.5 0.3 0.7	0.5 0.5 0.6 1.1 1.4 1.6	2.1 2.8 2.8 5.4 2.9 2.3 3.0	0.1 0.2 0.3 0.3 0.5 0.3 0.3	9.0 10.0 5.9 3.8 5.2 4.9 4.2	1.0 0.9 0.6 0.5 0.6 0.6 0.5	7.6 8.4 13.7 19.4 28.2 23.7 32.4 36.0	1.9 1.9 2.9 3.2 3.9 3.8 4.9 5.7	
VCS VCS VCS VCS VCS VCS VCS	Apr May** Jun* Jul* Aug* Sep* Oct*	27.5 26.2 29.1 42.0 34.7 44.9 59.1 53.7	2.1 2.2 2.2 2.3 2.7 2.5 2.7 3.5 3.5	99.8 102.9 115.3 112.8 106.1 107.8 98.5 84.4 83.6	1.0 1.0 1.0 1.0 0.9 0.9 0.9	0.5 1.0 0.7 0.7 0.7 1.4 1.3 1.3	5.3 4.8 5.6 5.4 0.8 3.7 3.6 3.4	2.1 2.2 2.8 3.6 0.4 0.6 0.7 0.8 0.7	2.0 2.9 1.7 1.4 4.9 1.8 1.4 1.9	1.3 1.7 1.6 1.6 2.7 1.7 1.6 1.9 2.6	0.0 0.1 0.6 0.5 0.3	0.5 0.5 0.6 1.1 1.4	2.1 2.8 2.8 5.4 2.9 2.3 3.0 2.4	0.1 0.2 0.3 0.3 0.5 0.3 0.3 0.3	9.0 10.0 5.9 3.8 5.2 4.9 4.2 4.8 9.8	1.0 0.9 0.6 0.5 0.6 0.6 0.5 0.6	7.6 8.4 13.7 19.4 28.2 23.7 32.4 36.0 26.7	1.9 1.9 2.9 3.2 3.9 3.8 4.9 5.7 4.5	
VCS VCS VCS VCS VCS VCS VCS	Apr May** Jun* Jul* Aug* Sep* Oct* Nov	27.5 26.2 29.1 42.0 34.7 44.9 59.1 53.7 37.3	2.1 2.2 2.2 2.3 2.7 2.5 2.7 3.5 3.5	99.8 102.9 115.3 112.8 106.1 107.8 98.5 84.4 83.6 94.1	1.0 1.0 1.0 1.0 0.9 0.9 0.9 1.0	0.5 1.0 0.7 0.7 0.7 1.4 1.3 1.3 0.6	5.3 4.8 5.6 5.4 0.8 3.7 3.6 3.4 1.6 5.8	2.1 2.2 2.8 3.6 0.4 0.6 0.7 0.8 0.7	2.0 2.9 1.7 1.4 4.9 1.8 1.4 1.9 4.4 6.1	1.3 1.7 1.6 1.6 2.7 1.7 1.6 1.9 2.6 2.9	0.0 0.1 0.6 0.5 0.3 0.7	0.5 0.5 0.6 1.1 1.4 1.6 1.4	2.1 2.8 2.8 5.4 2.9 2.3 3.0 2.4 1.8	0.1 0.2 0.3 0.3 0.5 0.3 0.3 0.3 0.3	9.0 10.0 5.9 3.8 5.2 4.9 4.2 4.8 9.8	1.0 0.9 0.6 0.5 0.6 0.6 0.5 0.6 1.0	7.6 8.4 13.7 19.4 28.2 23.7 32.4 36.0 26.7 10.5	1.9 1.9 2.9 3.2 3.9 3.8 4.9 5.7 4.5 2.1	
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VCS VCS VCS VCS VCS VCS VCS	Apr May** Jun* Jul* Aug* Sep* Oct* Nov	27.5 26.2 29.1 42.0 34.7 44.9 59.1 53.7 37.3	2.1 2.2 2.3 2.7 2.5 2.7 3.5 3.5 2.5 3.8	99.8 102.9 115.3 112.8 106.1 107.8 98.5 84.4 83.6 94.1 87.5	1.0 1.0 1.0 1.0 0.9 0.9 0.9 1.0 1.0	0.5 1.0 0.7 0.7 0.7 1.4 1.3 1.3 0.6	5.3 4.8 5.6 5.4 0.8 3.7 3.6 3.4 1.6 5.8	2.1 2.2 2.8 3.6 0.4 0.6 0.7 0.8 0.7	2.0 2.9 1.7 1.4 4.9 1.8 1.4 1.9 4.4 6.1	1.3 1.7 1.6 1.6 2.7 1.7 1.6 1.9 2.6 2.9	0.0 0.1 0.6 0.5 0.3 0.7 0.0	0.5 0.5 0.6 1.1 1.4 1.6 1.4	2.1 2.8 2.8 5.4 2.9 2.3 3.0 2.4 1.8 3.2	0.1 0.2 0.3 0.3 0.5 0.3 0.3 0.3 0.3	9.0 10.0 5.9 3.8 5.2 4.9 4.2 4.8 9.8 10.9 24.8	1.0 0.9 0.6 0.5 0.6 0.5 0.6 0.5 1.0 2.1	7.6 8.4 13.7 19.4 28.2 23.7 32.4 36.0 26.7 10.5 11.2	1.9 1.9 2.9 3.2 3.9 3.8 4.9 5.7 4.5 2.1 2.6	
VCS VCS VCS VCS VCS VCS VCS	Apr May** Jun* Jul* Aug* Sep* Oct* Nov	27.5 26.2 29.1 42.0 34.7 44.9 59.1 53.7 37.3 65.0	2.1 2.2 2.2 2.3 2.7 2.5 2.7 3.5 3.5 2.5 3.8	99.8 102.9 115.3 112.8 106.1 107.8 98.5 84.4 83.6 94.1 87.5	1.0 1.0 1.0 1.0 0.9 0.9 0.9 1.0 1.0	0.5 1.0 0.7 0.7 0.7 1.4 1.3 1.3 0.6	5.3 4.8 5.6 5.4 0.8 3.7 3.6 3.4 1.6 5.8 12.7	2.1 2.2 2.8 3.6 0.4 0.6 0.7 0.8 0.7	2.0 2.9 1.7 1.4 4.9 1.8 1.4 1.9 4.4 6.1 4.6	1.3 1.7 1.6 1.6 2.7 1.7 1.6 1.9 2.6 2.9 2.7	0.0 0.1 0.6 0.5 0.3 0.7 0.0	0.5 0.5 0.6 1.1 1.4 1.6 1.4 0.7	2.1 2.8 2.8 5.4 2.9 2.3 3.0 2.4 1.8 3.2	0.1 0.2 0.3 0.3 0.5 0.3 0.3 0.3 0.3 0.2 0.3	9.0 10.0 5.9 3.8 5.2 4.9 4.2 4.8 9.8 10.9 24.8	1.0 0.9 0.6 0.5 0.6 0.5 0.6 1.0 2.1	7.6 8.4 13.7 19.4 28.2 23.7 32.4 36.0 26.7 10.5 11.2	1.9 1.9 2.9 3.2 3.9 3.8 4.9 5.7 4.5 2.1 2.6	
VCS VCS VCS VCS VCS VCS VCS VCS VCS	Apr May** Jun* Jul* Aug* Sep* Oct* Nov	27.5 26.2 29.1 42.0 34.7 44.9 59.1 53.7 37.3 65.0	2.1 2.2 2.3 2.7 2.5 2.7 3.5 3.5 2.5 3.8	99.8 102.9 115.3 112.8 106.1 107.8 98.5 84.4 83.6 94.1 87.5	1.0 1.0 1.0 1.0 0.9 0.9 0.9 1.0 1.0	0.5 1.0 0.7 0.7 0.7 1.4 1.3 1.3 0.6 0.6	5.3 4.8 5.6 5.4 0.8 3.7 3.6 3.4 1.6 5.8 12.7	2.1 2.2 2.8 3.6 0.4 0.6 0.7 0.8 0.7 3.1 3.6	2.0 2.9 1.7 1.4 4.9 1.8 1.4 1.9 4.4 6.1 4.6	1.3 1.7 1.6 1.6 2.7 1.7 1.6 1.9 2.6 2.9 2.7	0.0 0.1 0.6 0.5 0.3 0.7 0.0 0.6	0.5 0.5 0.6 1.1 1.4 1.6 1.4 0.7	2.1 2.8 2.8 5.4 2.9 2.3 3.0 2.4 1.8 3.2	0.1 0.2 0.3 0.3 0.5 0.3 0.3 0.3 0.3 0.2	9.0 10.0 5.9 3.8 5.2 4.9 4.2 4.8 9.8 10.9 24.8	1.0 0.9 0.6 0.5 0.6 0.5 0.6 1.0 2.1	7.6 8.4 13.7 19.4 28.2 23.7 32.4 36.0 26.7 10.5 11.2 7.6 21.7	1.9 1.9 2.9 3.2 3.9 3.8 4.9 5.7 4.5 2.1 2.6	
VCS	Apr May** Jun* Jul* Aug* Sep* Oct* Nov	27.5 26.2 29.1 42.0 34.7 44.9 59.1 53.7 37.3 65.0	2.1 2.2 2.2 2.3 2.7 2.5 2.7 3.5 3.5 2.5 3.8	99.8 102.9 115.3 112.8 106.1 107.8 98.5 84.4 83.6 94.1 87.5	1.0 1.0 1.0 1.0 0.9 0.9 0.9 1.0 1.0	0.5 1.0 0.7 0.7 0.7 1.4 1.3 0.6 0.6 0.9	5.3 4.8 5.6 5.4 0.8 3.7 3.6 3.4 1.6 5.8 12.7	2.1 2.2 2.8 3.6 0.4 0.6 0.7 0.8 0.7 3.1 3.6	2.0 2.9 1.7 1.4 4.9 1.8 1.4 1.9 4.4 6.1 4.6	1.3 1.7 1.6 1.6 2.7 1.7 1.6 1.9 2.6 2.9 2.7	0.0 0.1 0.6 0.5 0.3 0.7 0.0	0.5 0.5 0.6 1.1 1.4 1.6 1.4 0.7	2.1 2.8 2.8 5.4 2.9 2.3 3.0 2.4 1.8 3.2	0.1 0.2 0.3 0.3 0.5 0.3 0.3 0.3 0.3 0.2 0.3	9.0 10.0 5.9 3.8 5.2 4.9 4.2 4.8 9.8 10.9 24.8	1.0 0.9 0.6 0.5 0.6 0.5 0.6 1.0 2.1	7.6 8.4 13.7 19.4 28.2 23.7 32.4 36.0 26.7 10.5 11.2	1.9 1.9 2.9 3.2 3.9 3.8 4.9 5.7 4.5 2.1 2.6	

			1	1				1				1	1	
NOTES: Bu	urning profile v	was switched	from wo	od burnir	ng to agricultural	burning bas	ed on A	RB mor	nthly emission	ns invento	ry estimate	es.		
Aste	terisk * denote	s AgBWheat	profile u	sed; ** de	enotes WBAlmon	d (some Ag	BWhea	t/WBAIn	nond used in	April/May)			
		Source P	rofiles											
	Jan-Ma	ay and Nov-												
		Dec		June	-Oct									
Bu	urning 2	22 WBOakEu	IC	27	AgBWheat*									
S	Sulfate 5	7 Amsul		57	Amsul									
N	Nitrate 6	0 Amnit		60	Amnit									
Motor Ve	ehicle 6	5 CAMV		65	CAMV									
Tire/l	/Brake 6	7 TireBrke		67	TireBrke	Note: (not	used if	run cam	e out negativ	e)				
Geolo	logical 9	2 FDHANAN	١N	92	FDHANANN									
	g	3 FDFREAN	IN .	93	FDFREANN									
	9	4 FDVCSAN	NI	94	FDVCSANN									
	g	5 FDKERAN	N.	95	FDKERANN									

		Rollback	default	percentage, ad	just by episode pro	perties	
			Local	PM2.5	Sub regional	Regional	Total
		Default 2.5-10	70	15	10	5	100
		Default 2.5	50	30	15	5	100
		Note: distribut	ion of an	thropogenic co	ntribution after sub	traction of b	packground
	Mapping of local, PM2.5-local,						
	and sub-regional based on						
	trajectory analysis			,	Areas used		
	Site Name	Value	Local	PM2.5	Sub regional	Regional	# of dates
	Corcoran-Patterson Avenue	199					
12/31/98	Bakersfield-Golden State Highway	159					
	Visalia-N Church Street	160					
1/12/99	Oildale-3311 Manor Street	156	12	12,13	Kern	SJV	1
10/21/99	Corcoran-Patterson Avenue	174	6	5,6,7,8	Kings-Tulare	SJV	2
	Fresno-Drummond Street	162	3	3,4	Fresno-Madera	SJV	3
	Turlock-S Minaret Street	157	1	1,2	Stanislaus-Merced	SJV	4
11/14/99	Bakersfield-Golden State Highway	183	12	6,7,8,10,12	Kings-Tulare-Kern	SJV	5
12/11/99	Hanford-S Irwin Street	183					
12/17/99	Corcoran-Patterson Avenue	174	6	6,8	Kings-Tulare	SJV	6
12/23/99	Fresno-Drummond Street	168	3	3,4,7	Fresno-Tulare	SJV	7
	Hanford-S Irwin Street	156	5	5,6,8	Kings-Tulare	SJV	8
1/1/01	Bakersfield-5558 California Avenue	186	12	9,10,11,12	Kern	SJV	9
	Bakersfield-Golden State Highway	205	12	9,10,11,12	Kern	SJV	10
	Clovis-N Villa Avenue	155	3	3,4	Fresno-Madera	SJV	11
	Fresno-1st Street	193	3	3,4	Fresno-Madera	SJV	12
	Fresno-Drummond Street	186	3	3,4	Fresno-Madera	SJV	13
	Oildale-3311 Manor Street	158	12	9,10,11,12	Kern	SJV	14
1/4/01	Bakersfield-5558 California Avenue	190	12	10,12,13	Kern	SJV	15
	Bakersfield-Golden State Highway	208	12	10,12,13	Kern	SJV	16
	Fresno-Drummond Street	159	3	3,4	Fresno-Madera	SJV	17
	Oildale-3311 Manor Street	195	12	10,12,13	Kern	SJV	18
1/7/01	Bakersfield-5558 California Avenue	159	12	10,12	Kern	SJV	19
	Bakersfield-Golden State Highway	174	12	10,12	Kern	SJV	20
	Corcoran-Patterson Avenue	165	6	6,8,10,12	Kings-Tulare-Kern	SJV	21
	Hanford-S Irwin Street	185	5	5,6,7,8,10	Kings-Tulare-Kern	SJV	22
	Modesto-14th Street	158	1	1,2	St-Me-Ma- Fr-Tu	SJV	23
11/9/01	Hanford-S Irwin Street	155	5	5,7,8	Kings-Tulare	SJV	24



Technical Area: Air Quality

Data Request 8:

Please provide an analysis to demonstrate the feasibility of employing either the Rapid Start Process by GE or the Quick Start Process by Siemens as a mitigation measure to reduce the facility emission liability.

Response:

As described in AFC, Section 8.1-Air Quality, the KRCD CPP has proposed best available control technology (BACT) levels, which will minimize emissions of KRCD CPP criteria pollutants. These BACT levels are subject to the review and approval of the SJVAPCD. Further, the Air Quality Impact Analysis provided in AFC Sections 8.1.3.4 and 8.1.3.5 demonstrates that KRCD CPP emissions will not cause or significantly contribute to a violation of any Ambient Air Quality Standards. Finally, the KRCD CPP will provide emissions mitigation of 100% or more for all non-attainment emissions (and non-attainment emissions precursor pollutants). Therefore, the emissions of these pollutants will be fully mitigated or more than fully mitigated. Because KRCD CPP emissions will be mitigated to levels of insignificance through the use of ERCs, no additional mitigation measures, such as those described in this Data Request, are necessary.

Technical Area: Air Quality

Data Request 9:

Please provide discussion about the feasibility of using ultra-low sulfur diesel, which contains no more than 15 ppm sulfur, as fuel, for the fire pump engine and emergency generator.

Response:

Equipment selection of the fire pump engine and emergency generator will likely not take place until after a final decision has been made by the CEC regarding issuance of a Site Certificate. However, based on recent discussions with vendors of diesel fire pump drivers of the type and size required for the KRCD CPP, the use of ultra-low sulfur diesel fuel appears feasible for this application, and sufficient quantities of ultra-low sulfur diesel fuel appear to be available in the local area.

As noted in the AFC, the KRCD CPP intends to use ultra-low sulfur diesel fuel for the diesel fire pump, provided the use of this fuel is feasible. Assuming the circumstances described above (i.e., engine-fuel compatibility and fuel availability) are in effect when the project procures and subsequently operates the diesel fire pump, the KRCD CPP will use ultra-low sulfur diesel fuel for the fire pump.

The emergency generator will use natural gas fuel, making the use of ultra-low sulfur diesel infeasible.

Technical Area: Air Quality

Data Request 10:

Please provide a text file describing the provided input and output modeling files.

Response:

A summary of all output files can be found in the Air Quality Appendix 8.1-6, Air Dispersion Modeling Data, under the sections GE Modeling Output Summary and Siemens Modeling Output Summary. These summaries list the modeling output file name, which modeling case/scenario the file represents, as well as where the emission rate can be found, which pollutant is included, and the resulting predicted highest concentration and its location. The input files have the same names, except with a ".INP" extension.

Technical Area: Air Quality

Data Request 11:

Please provide the missing output files (in electronic format) for the Siemens turbines.

Response:

The Siemens 1-hour nitrogen dioxide (NO2) output files were mistakenly omitted from the AFC and are included as Attachment Air-2.

ATTACHMENT AIR-2

Siemens 1-hr NO₂ Files (provided in electronic format)

Technical Area: Air Quality

Data Request 12:

Please provide discussions of why more recent ozone data are not used in the modeling analysis to evaluate the project's one-hour NO₂ emission impacts.

Response:

The ozone data and meteorological data should be concurrent when performing the hourly ozone limiting analysis; otherwise the meteorology that may cause high ozone concentrations will not match the measured ozone concentrations. As identified in the air dispersion modeling protocol (AFC Appendix 8.1-2), 1989 meteorological data were recommended by the SJVAPCD for the air quality analysis therefore, 1989 ozone data were also used.

Technical Area: Air Quality

Data Request 13:

Please provide the cumulative impacts analysis that includes analyses of cumulative impacts for the 1-hour NO₂ and the 24-hour PM10 and PM2.5 standards.

Response:

KRCD has requested the information necessary to perform a cumulative impacts analysis from the SJVAPCD. This request was originally made in January 2007 and due to miscommunication with the SJVAPCD Public Information Office the information was not provided. The request has been followed up, most recently in January 2008. Upon receipt of this data, the analysis for 1-hour NO2 impacts will be performed. Since PM10 impacts are less than the applicable significance levels, a cumulative impacts analysis is not necessary. Although PM2.5 significance levels have not been established, analogous to PM10 impacts, it is reasonable to conclude that KRCD CPP PM2.5 impacts are less than significant and that a cumulative impacts analysis is also not necessary. KRCD anticipates being able to provide the cumulative impacts analysis in early April 2008.

Technical Area: Biological Resources

Data Request 14:

Please contact the California Department of Fish and Game (CDFG) and provide a report of conversation that includes information about whether the proposed project will need to acquire a Streambed Alteration Agreement and any guidance provided by CDFG. Please also provide contact information for the CDFG staff person who provides comments, copies of any written materials provided by KRCD to CDFG related to the Streambed Alteration Agreement, an estimated schedule for the CDFG submittals and permits, and a copy of any written correspondence that CDFG provides related to the streambed issue.

Response:

Biological resources consultant to KRCD, Halstead & Associates contacted the California Department of Fish and Game (CDFG) by letter on January 22, 2008 asking if a Streambed Alteration Agreement (SAA) will be necessary for the KRCD CPP. A copy of that letter is includes as Attachment Bio-1. Enclosed with that letter was a copy of the Wetlands and Waters Evaluation (May 2007) report by Halstead & Associates to provide background information to the CDFG. The Wetlands and Waters Evaluation is Appendix 8.16-3 in the KRCD CPP AFC. AFC Appendix 8.16-3 states that a SAA would not be necessary for the KRCD CPP because all work would occur outside the bed, bank, and riparian habitat of the Kings River and intermittent drainages of Cross Creek and that no impacts would occur to those resources. Furthermore, numerous preventive measures (such as buffer zones, fencing, restricted work areas, signage, educational program, on-site biologist, pre- and post-monitoring) were incorporated into the KRCD CPP to completely avoid any potential impacts.

On February 13, 2008, the CDFG (along with the biologists from the CEC, U. S. Fish and Wildlife Service, and Halstead & Associates) toured the KRCD CPP project area and examined the understream crossing areas along the natural gas pipeline route to determine if a SAA would be necessary. The CDFG stated that they thought a SAA might be needed, but would have to forward pertinent project information to CDFG legal staff in Sacramento for an official CDFG opinion on whether or not a SAA would be required. The CDFG noted that it may take several months to get an opinion back from their legal staff. Due to the potential project delays associated with CDFG review for a determination on whether or not a SAA would be necessary, KRCD and Halstead & Associates decided to proceed in preparing the documents necessary to obtain a SAA for the gas pipeline crossings underneath the Kings River and intermittent

drainages of Cross Creek rather than waiting for a legal opinion from the CDFG. The SAA application will be completed and submitted to the CDFG in spring 2008. Issuance of a SAA would likely occur in summer or fall of 2008. A copy of the SAA application will be forwarded to the CEC when it becomes available.

An updated Record of Conversation (see AFC Appendix 8.16-9) was also prepared and is included as Attachment Bio-2.

ATTACHMENT BIO-1

Correspondence to CDFG

HALSTEAD & ASSOCIATES Environmental / Biological Consultants

296 Burgan Avenue, Clovis, CA 93611 Office (559) 298-2334; Mobile (559) 970-2875 Fax (559) 322-0769; HalsteadEnv@aol.com

January 22, 2008

Mr. Brian Erlandsen
California Department of Fish and Game
San Joaquin Valley and Southern Sierra Region
Environmental Services Section, Stream Alteration Agreements
1234 E. Shaw Avenue
Fresno, CA 93710

RE: Kings River Conservation District's Community Power Plant (Fresno & Tulare Counties)
Potential Need for a Stream Alteration Agreement for the Project

Dear Brian:

The Kings River Conservation District is proposing a 565 megawatt natural gas-fired power plant near the City of Parlier (Fresno County, California) and has filing an Application For Certification (AFC) with the California Energy Commission (CEC) for permitting of the plant. Specifically, the plant will set upon a 20 acre parcel just northeast of the intersection of Bethel and Dinuba Avenues. A 15-acre parcel south of the plant site and a 60-acre parcel west of the site will be used as construction yards for the project. The project involves four basic components including the power plant site, natural gas pipeline, water pipeline, and transmission lines (see attached map). Many miles of water pipeline, transmission lines, and gas pipeline are proposed for the project. The first two structures will occur in Fresno County and the gas pipeline will interconnect with an existing gas pipeline near Visalia in Tulare County and run north to the power plant site in Fresno County.

In May 2007, we conducted reconnaissance surveys to evaluate if wetlands and waters occur on the project site and along the water, gas, and transmission line routes. Also, the field surveys were used to examine, evaluate, and determine if wetlands or waters occur on adjacent private lands and could be impacted by the project. Three areas with wetlands and waters occur along the project routes including:

Cross Creek area south of Traver

(Section 34, Township 17S, Range 23E, Traver Quad, Tulare County)

- Kings River near Kingsburg
 (Section 17, Township 16S, Range 23E, Reedley Quad, Fresno County)
- Manning Recharge Basin north of Selma (Sec. 21, Township 15S, Range 22E, Selma Quad, Fresno County)
 The Cross Creek area is annual grassland habitat that has six intermittent drainages, some of which are wetlands and some are waters. The gas pipeline will occur in the Road 60 right-of-way; however, private lands adjacent to the right-of-way have wetland ponds, vernal pool wetlands, the endangered Vernal Pool Tadpole Shrimp, Critical Habitats, and potentially other sensitive species too. The Kings River at the gas pipeline route is a waters and has wetland and riparian habitat along its banks. The Manning Recharge Basin has poor quality wetland habitat in the bed of its basin and its banks have upland habitat.

The project has been designed to avoid and/or lessen impacts to wetlands and waters. Examples of such actions include the locating and constructing of the gas pipeline and the water pipeline in the right-of-ways of existing roads. Also, the use of Jack and Bore and Horizontal Directional Drilling techniques to install the gas pipeline underneath the Kings River and the intermittent drainages in the Cross Creek area avoids project impacts at those locales. At the Manning Recharge Basin, four H-framed transmission line towers (with a total of eight legs) will be constructed and erected inside the basin. The footprint of the towers will permanently impact approximately 0.003 acres of poor quality wetland habitat. During construction and erection of the towers, some temporary impacts will also occur to approximately one acre of poor quality wetland habitat in the basin, but that area will be restored.

As noted above and in our Wetlands and Waters Evaluation (enclosed), the KRCD will bore underneath the Kings River and intermittent drainages in the Cross Creek area. No work or impacts will occur in the bed or bank of these waters or in riparian or wetland habitat along their banks. A buffer zone of 500 feet outward on either side of the riparian habitat of the Kings River will occur. A buffer zone of 50 feet outward on either side of the intermittent drainages in the Cross Creek area will occur.

In the AFC, we noted that a Stream Alteration Agreement (1602 Permit) would not be necessary due to the implementation of protective measures and the complete avoidance of the intermittent drainages, waters, and riparian habitat. The CEC has asked that we double check with you on whether or not the KRCD will need a Stream Alteration Agreement (see their attached Data Request). Would you please send

us a letter or email concerning the need for a Stream Alteration Agreement and any additional guidance.

Sincerely,

Jeffrey A. & Pamela S. Halstead Owners/Partners/Biologists

cc: Mr. Jim Richards (KRCD)

Ms. Amy Cuellar (Navigant Consulting, Inc.)

ATTACHMENT BIO-2

Record of Conversation (updated)

KRCD CPP

RECORD OF CORRESPONDENCE (November 2007 thru January 2008)

Telephone, email, and personal communications (Biological Resources)

Halstead & Associates, Environmental/Biological Consultants

November 01, 2007

Email to Ramon Aberasturi (ACOE, Sacramento)

We emailed to inquire about their jurisdiction in the Manning Recharge Basin and use of Nationwide Permit #12 for wetland impacts.

December 05, 2007

Email to Jeff Jorgenson (USFWS, Sacramento)

Email regarding their receipt of the Biological Assessment Report.

December 06, 2007

Email from Jeff Jorgenson (USFWS, Sacramento)

Jeff received two copies of the Biological Assessment Report.

December 06, 2007

Telephone conversation with Ramon Aberasturi (ACOE, Sacramento)

He called regarding another project, but we inquired about their jurisdiction in the Manning Recharge Basin and use of Nationwide Permit #12 for wetland impacts. He recommended that we send maps and a project description and he will review for applicability.

January 10, 2008

Email to Jeff Jorgenson (USFWS, Sacramento)

We emailed about when he will review the Biological Assessment Report and provide comments. We also informed him that the proposed protocol biological surveys were underway or scheduled.

January 22, 2008

Letter to Brian Erlandsen (CDFG, Fresno)

We sent a letter regarding the potential need to obtain a Stream Alteration Agreement (1602 Permit) for the project. For background, we sent a copy of our Wetlands and Waters Evaluation (May 2007) report to him. This action was conducted to satisfy the CEC's Data Request #14.

January 22, 2008

Email to Ramon Aberasturi (ACOE, Sacramento)

We sent a letter inquiring about their jurisdiction in the Manning Recharge Basin and use of Nationwide Permit #12 for wetland impacts. For background, we sent a copy of our Wetlands and Waters Evaluation (May 2007) report to him.

January 25, 2008

Telephone call to Jeff Jorgenson (USFWS, Sacramento)

We called regarding his review of the Biological Assessment Report and he reported no major problems. He has been in contact with Brian McCollough (CEC) and would like to tour the project site for further evaluation. A site-tour will be conducted in the future.

January 31, 2008

Email from Jeff Jorgenson (USFWS, Sacramento)

Email regarding setup of a tour of the project site for February 13, 2008.

January 31, 2008

Email from Brian McCollough (CEC, Sacramento)

Email regarding setup of a tour of the project site for February 13, 2008.

Technical Area: Cultural Resources

Data Request 15:

Please provide descriptions of the anticipated maximum lateral and vertical extents of the ground disturbance that may result from the construction, operation, and maintenance of the main plant facility, the new natural gas pipeline, the new electric transmission line, the water supply line from Lincoln Ponds at the Sanger Wastewater Treatment Plant (WWTP), the water supply line from the Parlier WWTP into the adjacent main plant facility, and the new main plant facility wells.

Response:

Lateral ground disturbance for both the proposed gas and water pipeline installation is estimated at approximately 25 feet in width. This estimate includes pipeline burial area, temporary placement area for excavated material, and heavy equipment work area. Vertical disturbance for pipeline installation will generally be up to 6 feet.

In areas where Jack and Bore Construction is to take place for pipeline installation, lateral disturbance around bore pit is estimated at approximately 50 feet around pit area. No vertical disturbance is anticipated. Lateral disturbance for pit area is estimated at 20 feet in length and 20-30 feet in width (see AFC Volume 3–Figure 5-2 for Jack and Bore Construction detail). Maximum vertical disturbance for pit depth is estimated at 25 feet.

Lateral ground disturbance for gas pipeline staging areas would include the entire proposed 200 foot by 200 foot area. No vertical disturbance is anticipated.

Lateral ground disturbance during the construction of the transmission line will be concentrated at the structure locations where an area approximately 100 feet square will be disturbed to install foundations, assemble and erect structures. Minimal ground disturbance will occur by the passage of vehicles along the right of way to string conductors between the towers. The natural contours of the ground will not be modified and will be restored at the structure locations after construction is completed. Vertical disturbance will be limited to that caused by the excavation of the foundations for the structures. Foundations will be approximately 20 feet in depth and five feet in diameter.

Lateral disturbance for new main plant facility wells is estimated at approximately 30 feet around wells.



Technical Area: Cultural Resources

Data Request 16:

To facilitate the completion of the cultural resources inventory for the proposed project:

- a) Please describe and provide maps (scale of 1:24,000) for each portion of the required survey area, including construction staging areas and linear facility corridors, that the applicant has been unable to survey at the surface.
- b) Please provide a schedule for the completion of the surface survey of the required survey area.
- c) Please provide a plan for surveying the private property in the required survey area to which the applicant has had no access.

Response:

Cultural resource consultant to KRCD, Pacific Legacy, did conduct a survey for cultural resources within the entire area that the CEC April 2007 *Rules of Practice and Procedure & Power Plant Site Certification Regulations* (Rules of Practice) prescribe for a proposed power plant and associated linear facilities. Only a few areas were not directly accessed for surveys due to the fact that access to these properties had not yet been granted. As discussed in AFC Section 8.14, Cultural Resources, parcels that were unable to be directly accessed were either viewed from adjacent or nearby parcels where access had been obtained or were viewed from the public right-of-way.

The original figures 2-7 in the Archaeological Survey Report depict the Project Area, Survey Coverage and Resource Locations. This report was previously submitted to the CEC under confidential cover. Unsurveyed project areas (highlighted) were clearly distinguished from the surveyed project areas (highlighted with cross-hatching). Unsurveyed areas include parcels along the proposed and alternate transmission line routes and staging areas for the natural gas pipeline route located on private property.

In October 2007, Dorothy Torres of the CEC requested that the plotted resource locations be amended to distinguish between those resources which were newly identified and recorded, those that were previously recorded and updated, and those which were noted but beyond the project right of way (ROW). These changes were made on a new set of maps and resources were color coded for easy distinction. These new maps, were submitted, under confidential cover, as part of KRCD CPP Supplement A, dated November 2007, and were to be inserted at the beginning of

Archaeological Survey Report Appendix C-Primary Records and Updates for Identified Resources. Apparently they were inadvertently inserted to replace by Figures 2-7 in the Archaeological Survey Report which should have remained the same. An additional copy of Figures 2-7 from the March 2007 Archaeological Survey Report have been submitted under confidential cover.

The unsurveyed areas in the KRCD CPP project area include approximately 2.8 miles of the transmission line routes which are primarily in agricultural lands. The only remaining unsurveyed portions of the project area are the 20-acre construction staging area located adjacent to the project site and four small (2-5 acre) parcels along the natural gas pipeline route which will be used as staging areas during construction. These areas are comprised of open fields which are adjacent to residential ranch complexes and which were formerly used for agricultural pursuits. As previously stated, parcels that were unable to be directly accessed were either viewed from adjacent or nearby parcels where access had been obtained or were viewed from the public right-of-way.

Areas not included in the original survey due to access will be surveyed for cultural resources prior to project construction.

Technical Area: Cultural Resources

Data Request 17:

With regard more specifically to the completion of the cultural resource inventory for the proposed natural gas lateral:

- a) Please provide the widths of the rights-of-way (ROWs) along the roadways where the construction of the new natural gas pipeline is proposed.
- b) Please also describe the variations in the general physical and biological character of each such ROW.
- c) Explain how the results of the applicant's ROW pedestrian surveys are reliable indices of the archaeological deposits that may be beneath the roadways.
- d) Discuss the appropriateness of subsurface testing of the ROWs for any such deposits.

Response:

The surveyed ROW along the proposed natural gas pipeline varied in width (averaging between 50 and 100 feet wide) but included all areas from the edge of pavement of the existing roadway to the property fence lines on either sides of the roadways. There were slight variations in the ROW setting along the route but it typically consisted of a narrow strip between the edge of pavement of the existing roadway and the fence lines of private properties. The private properties consist of residences and ranches with associated agricultural lands primarily planted in raisin vineyards or tree nut crops.

Archaeological crews inspected the banks of irrigation ditches and all areas of exposed mineral soils along the ROW for the presence of cultural constituents indicative of prehistoric and historic archaeological sites. Visibility varied within the corridor depending on the width of the roadway and was limited near residences due to concrete and asphalt driveway entrances and various developments. Approximately 50% of the ROW contained mineral soils which could be inspected for cultural constituents. The remaining 50% comprised the asphalt roadways, concrete and gravel entrances to residences and ranch complexes and existing infrastructures (concrete lined irrigation canals). A small amount of the visible soil appeared to be imported fill material, and these fill soils were mostly adjacent to driveway entrances, roadways and railroad grades. Most of the inspected surface soils were adjacent to agricultural parcels planted in raisin and tree nut crops, which appeared to have minimal impacts related to the agricultural pursuits. The project area is very flat and is represented by alluvial soil deposits. As such, there was



limited areas of previous cutting and filling of soils and those that were present were usually

associated with cultural features like railroad grades and the excavation of soils for existing irrigation features. Rodent burrows within the surface mineral soils allowed for an occasional check of subsurface deposits but these were limited within the ROW.

Notes were made of adjacent residences and properties beyond the ROW which might warrant cultural consideration if there are changes in the existing ROW. Note that the surveyed project area ROW is wider than the Area of Direct Impact (ADI) for installation and maintenance of the proposed pipeline so that contemporary, actively used agricultural features or similar areas of concern (i.e. foundations, railroad grades, or other features) will be avoided. The exact route of the gas pipeline has yet to be engineered but will most likely occur adjacent to the existing roadways where buried infrastructures are likely already present (i.e., sewer lines, water lines, fiber optic cables).

Subsurface testing of the ROW would not be appropriate as it would necessitate cutting concrete along the existing roadways and driveway entrances for those areas which had limited or no surface mineral soil. There is always a remote chance that undetected cultural resources are buried within a project area. Construction crews will have cultural resources awareness training prior to project development and an archaeologist will be on call should an unanticipated discovery occur as a result of project construction. In addition, initial subsurface construction work in sensitive archaeological areas (such as those in proximity to the Kings River and other stream crossings) will be monitored by a qualified archaeologist to ensure that potentially buried resources will be protected.

Technical Area: Cultural Resources

Data Request 18:

Please provide a confidential, composite inventory, on one map set and in tabular form, of the resources that Pacific Legacy and JRP have found, to date, in the required survey area. Please provide the map set as a series of unique sheets at a scale of 1:24,000, preferably using the same base maps as those requested above for areas that have yet to be surveyed. Please also develop the table to clearly identify those instances where both surveys found the same resource, but gave it different field designations.

The requested table should further include:

- a. Separate columns that display Pacific Legacy's and JRP's temporary field designations for each resource.
- b. Any permanent designations that any of the resources may now carry.
- c. Recommendations on the resources' California Register of Historical Resources (CRHR) eligibility.
- d. Each resource's distance (in meters) to the nearest project component.

Response:

There is an overlap of 10 resources which were identified by both Pacific Legacy and JRP Historical Consultants. These are referenced in the following table by Pacific Legacy field designation (PLI) and JRP Map Reference Number (JRP). Of these, only four resources lie within both the Pacific Legacy and JRP survey areas (i.e. PLI-1, PLI-2/8/13, PLI-9 and PLI-10). These four resources were recorded by both teams and were evaluated for historical significance by JRP. The remaining six resources (PLI-3, PLI-5, PLI-6, PLI-7, PLI-18 and PLI-19) were noted by Pacific Legacy but they are located beyond the archaeological survey area. However, these resources were recorded and evaluated for historical significance by JRP as they were within the historic resources survey boundary of the plant site and overhead transmission lines.

Cu	Cultural Resources Identified by both JRP and Pacific Legacy Surveys								
JRP Map Reference	Pacific Legacy Field	Description	Year Built	Eligible for					
Number	Designation			CRHR					
				or					
				NRHP					
JRP 1	PLI -1	Ranch complex at 9664 S. Bethel	1935	No					
		Ave. at proposed plant site							
JRP 47	PLI -19	Residence at 9825 S. Bethel Ave.	1910	No					
JRP 48	PLI-18	Buildings at 9691 S. Bethel Ave.	ca.1900 &	No					
			1955						
JRP 50	PLI-6	Residence & barns at 12036 E.	ca. 1920s	No					
		Manning Ave.	& 1951						
JRP 54	PLI-5	Jensen Residence at 8262 S. Bethel	1903	Yes					
		Ave.							
JRP 55	PLI-7	Ranch complex at 8471 S. Bethel	1920	No					
		Ave.							
JRP 56	PLI-3	Barn & residence at 8514 S.	1937	No					
		Indianola Ave.							
JRP 90	PLI-2, -8 & -13	Selma Branch of the Centerville and	1878	No					
		Kingsburg Canal							
JRP 91	PLI-9	Walnut Ditch	ca. 1891	No					
JRP 92	PLI-10	Kirby Ditch	1882	No					
Agrontimoi	•	•	•	•					

Acronyms:

CRHR - California Register of Historic Resources

NRHP – National Register of Historic Places

Eighty four additional historic structures and buildings were identified and evaluated by the JRP crew as being within the historic resources survey boundary of the plant site and overhead transmission lines. These were beyond the survey corridors inspected by the Pacific Legacy archaeological survey. Results of these evaluations were included in the "Draft Historical Resources Inventory and Evaluation Report for the Kings River Conservation District Community Power Plant Project" (HRIER), dated July 2007, which was previously submitted to the CEC.

Pacific Legacy identified and recorded 18 other resources (PLI-11, PLI-14, PLI-15/50, PLI-20, PLI-30, PLI-32, PLI-33, PLI-37, PLI-55, PLI-63, PLI-67, PLI-70, PLI-77, PLI-81, PLI-85, PLI-88, P-54-2171, and P-54-2172). These consist of a former railroad grade, 16 irrigation canals, and a concrete foundation remnant. These were located beyond the view shed and survey

corridor of the JRP crew. Also, 59 additional resources were noted by Pacific Legacy as being just beyond their survey corridor and which were also beyond the view shed of the plant site and overhead transmission lines, and as such were not inventoried or evaluated by the JRP team. Results of these evaluations were included in the "Archaeological Survey Report" dated March 2007, which was previously submitted to the CEC under confidential cover.

Figure showing all identified resources by both Pacific Legacy and JRP were submitted to the CEC under confidential cover.

Exact distances to the resources evaluated by Pacific Legacy have not been provided as the distances would vary considerably until the exact pipeline locations are engineered. The distances for the four historic resources evaluated by JRP are included in the table below. The distance provided is from the evaluated structure to either the edge of the proposed transmission line ROW or to the project site boundary.

JRP Map Reference Number	Parcel Number (APN)	Address / Notes	Year Built	Distance to Nearest Project	Eligible for CRHR or NRHP
2	358-031-87	9280 S. Bethel Ave. (Unger/Avery Residence)	ca. 1903	500 meters	Yes
54	353-061-07	8262 S. Bethel Ave. (Jensen Residence)	1903	600 meters	Yes
70	345-031-20	8601 E. South Ave. (Jamieson Residence)	1883	630 meters	Yes
80	353-050-29S	8603 S. McCall Ave. (Martin Residence)	1894	150 meters	Yes

A comprehensive table of all identified cultural and historic resources is included as Attachment Cul-1.

ATTACHMENT CUL-1

Inventory of Identified Resources



Comprehensive JRP and Pacific Legacy Historical Resources Identified and/or Evaluated for the KRCD Community Power Plant Project (n = 171)

Arranged in order by JRP Map Reference Numbers (all 94 of which were evaluated) and Pacific Legacy Field Designation & Primary Record Numbers (22 of which were recorded [in APE] & 65 noted [beyond APE], except for the 10 resources which overlap with the JRP numbers)

*two built dates denote multiple residences on the property

**multiple field designations denote various segments of same linear resource

JRP Map Reference Number	Pacific Legacy Field Designation** or Primary Record Number	Parcel Number (APN)	Address / Notes	Year Built*	Eligible for CRHR or NRHP
JRP-1	PLI-1	358-031-33	9664 S. Bethel Ave.	1935	No
JRP-2	-	358-031-87	9280 S. Bethel Ave. (Unger/Avery Residence)	ca. 1903	Yes
JRP-3	-	358-031-35	12270 E. Dinuba Ave.	1922	No
JRP-4	-	358-031-36	12310 E. Dinuba Ave.	1910	No
JRP-5	-	358-031-37	12322 E. Dinuba Ave.	ca. 1960	No
JRP-6	-	358-031-38	12328 E. Dinuba Ave.	1950	No
JRP-7	-	358-260-05S	9533 S. Academy Ave.	1950	No
JRP-8	-	358-260-23S	9523 / 9525 / 9527 S. Academy Ave.	1952 / ca. 1960	No
JRP-9	-	358-260-02S	9521 S. Academy Ave.	ca. 1960s	No
JRP-10	-	358-260-03S	9527 S. Academy Ave.	1950 (moved 1990)	No
JRP-11	-	358-260-25S	9391 S. Academy Ave.	1938 (moved 1960s)	No
JRP-12	-	358-260-12\$	9503 S. Academy Ave.	1956	No
JRP-13	-	358-260-14S	9499 S. Academy Ave.	1949	No
JRP-14	-	358-260-19S	9477 S. Academy Ave.	1949	No

JRP Map Reference Number	Pacific Legacy Field Designation** or Primary Record Number	Parcel Number (APN)	Address / Notes	Year Built*	Eligible for CRHR or NRHP
JRP-15	-	358-260-17S	9463 S. Academy Ave.	1948	No
JRP-16	-	358-260-20S	9495 S. Academy Ave.	1948	No
JRP-17	-	358-260-15S	9501 S. Academy Ave.	1950	No
JRP-18	-	358-260-07S	9595 S. Academy Ave.	ca. 1950	No
JRP-19	-	358-031-85ST	12716 E. Dinuba Ave.	ca. 1940s	No
JRP-20	-	358-031-43	12592 E. Dinuba Ave.	1961	No
JRP-21	-	358-031-63	12376 E. Dinuba Ave.	1946	No
JRP-22	-	358-270-41	12735 E. Dinuba Ave.	1928 (moved ca.1966)	No
JRP-23	-	358-270-04	12365 E. Dinuba Ave.	1924	No
JRP-24	-	358-270-03	12323 E. Dinuba Ave.	1940	No
JRP-25	-	358-270-14	12347 E. Dinuba Ave.	1952	No
JRP-26	-	358-270-15	12247 E. Dinuba Ave.	ca. 1940 (moved 1972)	No
JRP-27	-	358-270-16	12239 E. Dinuba Ave.	1950	No
JRP-28	-	358-270-18	12245 E. Dinuba Ave.	1952	No
JRP-29	-	358-270-17	12241 E. Dinuba Ave.	1950	No
JRP-30	-	358-270-20	12243 E. Dinuba Ave.	1950	No
JRP-31	-	358-270-32S	12198 E. Huntsman Ave.	1960 (moved 1973)	No
JRP-32	-	358-270-31S	12068 E. Huntsman Ave.	1954	No
JRP-33	-	358-270-26	10426 S. Bethel Ave.	1955	No

JRP Map Reference Number	Pacific Legacy Field Designation** or Primary Record Number	Parcel Number (APN)	Address / Notes	Year Built*	Eligible for CRHR or NRHP
JRP-34	-	358-270-48	10338 S. Bethel Ave.	ca. 1930s / 1950	No
JRP-35	-	358-270-30	10158 S. Bethel Ave.	1951	No
JRP-36	-	358-050-93	10373 & 10371 S. Bethel Ave.	ca. 1920 / 1926	No
JRP-37	-	358-270-34	12283 E. Dinuba Ave.	1939	No
JRP-38	-	358-270-33	12265 E. Dinuba Ave.	1962	No
JRP-39	-	358-050-84	10309 S. Bethel Ave.	1960	No
JRP-40	-	358-050-04	10135 S. Bethel Ave.	ca. 1920	No
JRP-41	-	358-031-18	11736 E. Dinuba Ave.	1950	No
JRP-42	-	358-031-17; 358-031-70	11525 E. Dinuba Ave. (Indianola Elementary School)	1955 / 1961	No
JRP-43	-	358-031-05	11410 E. Dinuba Ave.	ca. 1916	No
JRP-44	-	358-031-03	11292 E. Dinuba Ave.	1950	No
JRP-45	-	358-031-99	11700 E. Dinuba Ave.	ca. 1920	No
JRP-46	-	358-031-07	11250 E. Dinuba Ave.	ca. 1955	No
JRP-47	PLI-19	358-031-20	9825 S. Bethel Ave.	1910	No
JRP-48	PLI-18	358-031-21	9691 S. Bethel Ave.	ca. 1900 / 1955	No
JRP-49	-	358-031-73	11949 E. Manning Ave.	1942	No
JRP-50	PLI-6	353-061-53	12036 E. Manning Ave.	ca. 1920s / 1951	No
JRP-51	-	353-061-40	8816 S. Bethel Ave.	1924 / ca. 1955	No
JRP-52	-	353-061-39	8752 S. Bethel Ave.	1925	No
JRP-53	-	353-061-38	8598 S. Bethel Ave.	1920	No

JRP Map Reference Number	Pacific Legacy Field Designation** or Primary Record Number	Parcel Number (APN)	Address / Notes	Year Built*	Eligible for CRHR or NRHP
JRP-54	PLI-5	353-061-07	8262 S. Bethel Ave. (Jensen Residence)	1903	Yes
JRP-55	PLI-7	353-061-65	8471 S. Bethel Ave.	1920	No
JRP-56	PLI-3	353-061-28	8514 S. Indianola Ave.	1937	No
JRP-57	-	353-061-48	8355 S. Indianola Ave.	1930	No
JRP-58	-	353-061-15	11381 E. South Ave.	1910	No
JRP-59	-	353-061-16	11315 E. South Ave.	1912 / ca. 1950	No
JRP-60	-	353-061-21	8366 S. Del Rey Ave.	ca. 1930	No
JRP-61	-	353-061-19	11137 E. South Ave.	1925	No
JRP-62	-	353-070-02	8209 S. Del Rey Ave	1950 (moved 1972)	No
JRP-63	-	353-070-12	10841 E. South Ave.	1930	No
JRP-64	-	353-070-20	10591 E. South Ave.	1940	No
JRP-65	-	353-050-04	10129 E. South Ave.	1951 / ca. 1950s	No
JRP-66	-	353-050-42	8137 S. McCall Ave.	1945	No
JRP-67	-	353-050-02	9621 E. South Ave.	1910 / 1950	No
JRP-68	-	353-050-01; 353-050-41	9337 E. South Ave.	1920	No
JRP-69	-	345-031-16	8955 E. South Ave.	1934	No
JRP-70	-	345-031-20	8601 E. South Ave. (Jamieson Residence)	1883	Yes
JRP-71	-	345-031-22S	8447 S. Leonard Ave.	1955	No
JRP-72	-	345-190-03	8656 S. De Wolf Ave.	1962	No

JRP Map Reference Number	Pacific Legacy Field Designation** or Primary Record Number	Parcel Number (APN)	Address / Notes	Year Built*	Eligible for CRHR or NRHP
JRP-73	-	345-190-05	8690 S. De Wolf Ave.	1940	No
JRP-74	-	345-190-06S	8728 S. De Wolf Ave.	1960	No
JRP-75	-	345-190-04	8656 S. De Wolf Ave.	1905	No
JRP-76	-	345-190-21U	S. Leonard Ave. (McCall Substation)	1952	No
JRP-77	-	345-031-06	8464 S. Leonard Ave.	1957	No
JRP-78	-	353-050-69	9240 E. Manning Ave.	1926 / ca. 1950s	No
JRP-79	-	353-050-28	8473 S. McCall Ave.	1925	No
JRP-80	-	353-050-29S	8603 S. McCall Ave. (Martin Residence)	1894	Yes
JRP-81	-	353-050-25	8558 S. McCall Ave.	ca. 1920 / ca. 1950	No
JRP-82	-	353-050-15	10514 E. Parlier Ave.	1940 / ca. 1955	No
JRP-83	-	353-050-14	10534 E. Parlier Ave.	1945	No
JRP-84	-	353-050-46S	10574 E. Parlier Ave.	1962	No
JRP-85	-	353-050-11	10650 - 10656 E. Parlier Ave.	ca. 1910	No
JRP-86	-	353-050-61	10806 E. Parlier Ave.	1910	No
JRP-87	-	353-050-18	10928 E. Manning Ave.	ca. 1910	No
JRP-88	-	353-061-26S	11310 E. Manning Ave.	1939	No
JRP-89	-	353-061-51	8844 S. Indianola Ave.	ca. 1930s	No
JRP-90	PLI-2, PLI-8 & PLI-13	n/a	Selma Branch, Centerville and Kingsburg Canal	1878	No
JRP-91	PLI-9	n/a	Walnut Ditch	ca. 1891	No
JRP-92	PLI-10	n/a	Kirby Ditch	1882	No

JRP Map Reference Number	Pacific Legacy Field Designation** or Primary Record Number	Parcel Number (APN)	Address / Notes	Year Built*	Eligible for CRHR or NRHP
JRP-93	-	n/a	Fowler Switch Canal	1883	No
JRP-94	-	n/a	Kirby Canal	1882	No
-	PLI-11	n/a	Former railroad grade of the Atchison, Topeka and Santa Fe Railroad	Unknown	Recorded Not Yet Evaluated
-	PLI-14	n/a	Harp Ditch	Unknown	Recorded Not Yet Evaluated
-	PLI-15 & PLI-50	n/a	Cole Slough	Unknown	Recorded Not Yet Evaluated
-	PLI-20	n/a	Colony Ditch	Unknown	Recorded Not Yet Evaluated
-	PLI-30	n/a	Ward Drainage Canal	Unknown	Recorded Not Yet Evaluated
-	PLI-32	n/a	Concrete foundation remnant	Unknown	Recorded Not Evaluated
-	PLI-33	n/a	Kingsburg Branch Canal	Unknown	Recorded Not Yet Evaluated
-	PLI-37	n/a	Santa Fe Canal	Unknown	Recorded Not Yet Evaluated
-	PLI-55	n/a	Irrigation canal	Unknown	Recorded Not Yet Evaluated
-	PLI-63	n/a	Caesar Canal	Unknown	Recorded Not Yet Evaluated
-	PLI-67	n/a	McClanahan Ditch	Unknown	Recorded Not Yet Evaluated
-	PLI-70	n/a	Irrigation canal	Unknown	Recorded Not Yet Evaluated
-	PLI-77	n/a	Irrigation canal	Unknown	Recorded Not Yet Evaluated
-	PLI-81	n/a	Irrigation canal	Unknown	Recorded Not Yet Evaluated

JRP Map Reference Number	Pacific Legacy Field Designation** or Primary Record Number	Parcel Number (APN)	Address / Notes	Year Built*	Eligible for CRHR or NRHP
-	PLI-85	n/a	Mill Creek Ditch	Unknown	Recorded Not Yet Evaluated
-	PLI-88	n/a	North Fork Irrigation Canal	Unknown	Recorded Not Yet Evaluated
-	Primary Number P-54-002171	n/a	Traver Canal – previously recorded	Unknown	Record Updated Not Yet Evaluated
-	Primary Number P-54-002172	n/a	Banks Ditch – previously recorded	Unknown	Record Updated Not Yet Evaluated
-	PLI-4	n/a	Building remnant (tenant farmhouse) at northeast corner of parcel #25; under existing high voltage line	Unknown	Noted Only
-	PLI-12	n/a	Ranch complex at 12625 E. Lincoln Ave.	Unknown	Noted Only
-	PLI-16	n/a	Residence a 13704 E. Lincoln Ave.	Unknown	Noted Only
-	PLI-17	n/a	Residence; possible address at 13109 Adams Ave.	Unknown	Noted Only
-	PLI-21	n/a	Residence at 11122 Bethel Ave.	Unknown	Noted Only
-	PLI-22	n/a	Residence at 11561 Bethel Ave.	Unknown	Noted Only
-	PLI-23	n/a	Residence at 11654 Bethel Ave.	Unknown	Noted Only
-	PLI-24	n/a	Residence at 11778 Bethel Ave.	Unknown	Noted Only
-	PLI-25	n/a	Residence at 12370 Bethel Ave.	Unknown	Noted Only
-	PLI-26	n/a	Residence at 12548 Bethel Ave.	Unknown	Noted Only
-	PLI-27	n/a	Residence at 12774 Bethel Ave.	Unknown	Noted Only
-	PLI-28	n/a	Residence at 12408 Mtn. View Ave.	Unknown	Noted Only
-	PLI-29	n/a	Residence at 12540 Mtn. View Ave.	Unknown	Noted Only
-	PLI-31	n/a	Residence at 12709 Mtn. View Ave.	Unknown	Noted Only

JRP Map Reference Number	Pacific Legacy Field Designation** or Primary Record Number	Parcel Number (APN)	Address / Notes	Year Built*	Eligible for CRHR or NRHP
-	PLI-34	n/a	Residence at 12950 Mtn. View Ave.	Unknown	Noted Only
-	PLI-35	n/a	Residence; possible address at 12940 Mtn. View Ave.	Unknown	Noted Only
-	PLI-36	n/a	Residence at 12906 Mtn. View Ave.	Unknown	Noted Only
-	PLI-38	n/a	Residence at 14143 Mtn. View Ave.	Unknown	Noted Only
-	PLI-39	n/a	Residence at 14282 Mtn. View Ave.	Unknown	Noted Only
-	PLI-40	n/a	Residence at 14417 Mtn. View Ave.	Unknown	Noted Only
-	PLI-41	n/a	Residence at 14500 E. Mtn. View Ave.	Unknown	Noted Only
-	PLI-42	n/a	Residence at 14601 E. Mtn. View Ave.	Unknown	Noted Only
-	PLI-43	n/a	Residence at 14709 E. Mtn. View Ave.	Unknown	Noted Only
-	PLI-44	n/a	Residence; possible address at 14950 E. Mtn. View Ave.	Unknown	Noted Only
-	PLI-45	n/a	Residence at NE corner of Mtn. View Ave. & Zediker Ave.	Unknown	Noted Only
-	PLI-46	n/a	Residence at 15270 E. Mtn. View Ave.	Unknown	Noted Only
-	PLI-47	n/a	Residence at 15277 E. Mtn. View Ave.	Unknown	Noted Only
-	PLI-48	n/a	Residence at 15468 E. Mtn. View Ave.	Unknown	Noted Only
-	PLI-49	n/a	Residence at 15926 E. Mtn. View Ave.	Unknown	Noted Only
-	PLI-51	n/a	Residence at 41342 Road 32	Unknown	Noted Only
-	PLI-52	n/a	Residence at corner of Smith Ave. and Caruthers Ave; possible address 41179 Road 32	Unknown	Noted Only
-	PLI-53	n/a	Residence at 41168 Road 32	Unknown	Noted Only
-	PLI-54	n/a	Residence and barn at 40980 Road 32	Unknown	Noted Only

JRP Map Reference Number	Pacific Legacy Field Designation** or Primary Record Number	Parcel Number (APN)	Address / Notes	Year Built*	Eligible for CRHR or NRHP
-	PLI-56	n/a	Residence at 3747 Avenue 408	Unknown	Noted Only
-	PLI-57	n/a	Residence at 3872 Avenue 408	Unknown	Noted Only
-	PLI-58	n/a	Residence at 3888 Avenue 408	Unknown	Noted Only
-	PLI-59	n/a	Residence at 40649 Road 40	Unknown	Noted Only
-	PLI-60	n/a	Tank House and barn at 40484 Road 40	Unknown	Noted Only
-	PLI-61	n/a	Residence at 40174 Road 40	Unknown	Noted Only
-	PLI-62	n/a	Residence at 40045 Road 40	Unknown	Noted Only
-	PLI-64	n/a	Residence at 39652 Road 40	Unknown	Noted Only
-	PLI-65	n/a	Residence at 39461 Road 40	Unknown	Noted Only
-	PLI-66	n/a	Residence at 39462 Road 40	Unknown	Noted Only
-	PLI-68	n/a	Residence at 38977 Road 40	Unknown	Noted Only
-	PLI-69	n/a	Residence at 38148 Road 40	Unknown	Noted Only
-	PLI-71	n/a	Residence at 37428 Road 40	Unknown	Noted Only
-	PLI-72	n/a	Residence on west side of Road 40 south of PLI-71 (no address)	Unknown	Noted Only
-	PLI-73	n/a	Residence on Road 40 (no address)	Unknown	Noted Only
-	PLI-74	n/a	Existing Southern Pacific Railroad	Unknown	Noted Only
-	PLI-75	n/a	Remains of cinderblock building on east side of Road 36, north of Merritt Dr.	Unknown	Noted Only
-	PLI-76	n/a	Barn on west side of Road 60	Unknown	Noted Only
-	PLI-78	n/a	Concrete bridge on Road 60 at Cross Creek	Unknown	Noted Only
-	PLI-79	n/a	Concrete bridge on Road 60 at Cross Creek	Unknown	Noted Only

JRP Map Reference Number	Pacific Legacy Field Designation** or Primary Record Number	Parcel Number (APN)	Address / Notes	Year Built*	Eligible for CRHR or NRHP
-	PLI-80	n/a	Residence at 32399 Road 60	Unknown	Noted Only
-	PLI-82	n/a	Existing Southern Pacific Railroad	Unknown	Noted Only
-	PLI-83	n/a	Residence at NW corner of Road 60 and Avenue 308	Unknown	Noted Only
-	PLI-84	n/a	Residence at 6257 Avenue 308	Unknown	Noted Only
-	PLI-86	n/a	Residence at 30092 Road 68	Unknown	Noted Only
-	PLI-87	n/a	Residence at 29797 Road 68	Unknown	Noted Only

Technical Area: Cultural Resources

Data Request 19:

Please discuss how the "various utility routes will avoid impacting" (p. 20, section 8.14 of the AFC) each of the above 21 resources, and provide that information in written and tabular forms.

Response:

Other than the Barr Ranch Site, (PLI-1/JRP-1), the remaining 21 resources identified and recorded by Pacific Legacy consist of a concrete foundation remnant, an abandoned railroad grade, and 19 irrigation features (two of which were previously recorded and updated). Three of these irrigation features (the Selma Branch of the Centerville & Kingsburg Canal, the Walnut Ditch and the Kirby Ditch) are located within the view shed of the power plant and/or proposed transmission line route. These were evaluated by JRP as being not eligible for listing on the California Register of Historic Resources (CRHR) or the National Register of Historic Places (NRHP). The remaining resources are located within the ROW corridors for the proposed water and gas pipeline routes. The actual water and gas pipelines will be installed within the ROW adjacent to these resources. When the water and gas pipelines are parallel to existing features, they will be installed by boring underground and constructed so that the functioning irrigation canals will not be disturbed or impacted (as is likely the case with existing infrastructure along the current roadways). When the water and gas pipelines are perpendicular to the existing linear features, the resources will be evaluated prior to project construction. If any of these perpendicular linear resources are determined to be eligible for listing on the CHHR or NRHP, the pipeline will either be realigned or the pipeline will be constructed by boring to avoid impacting the resource. Thus, resource avoidance will occur through a combination of directional boring under linear feature crossings and/or realignment of pipeline routes paralleling linear resources. The following table provide a tabular listing of the recorded and updated resources identified by Pacific Legacy.

KINGS RIVER CONSERVATION DISTRICT COMMUNITY POWER PLANT

APPLICATION FOR CERTIFICATION (07-AFC-7) RESPONSES TO DATA REQUESTS 1-89

Summary of Recorded and Updated Resources in the KRCD-CPP Project Area by Pacific Legacy

Resource #	Description	Comments
PLI 1	Ranch complex at 9664 Bethel Ave	Evaluated by JRP (JRP 1) not eligible
PLI 2 / PLI 8 / PLI 13	Centerville and Kingsburg (C & K) canal (same canal as PLI 8 and PLI 13)	Evaluated by JRP (JRP 90) not eligible
PLI 9	Walnut Ditch, concrete-lined irrigation canal	Evaluated by JRP (JRP 91) not eligible
PLI 10	E. Kirby Ditch, concrete-lined irrigation canal	Evaluated by JRP (JRP 92) not eligible
PLI 11	Former railroad grade of the Atchison, Topeka and Santa Fe Railroad	Will be evaluated prior to construction. If eligible for the CRHR or NRHP, will be avoided by boring or realignment.
PLI 14	Harp Ditch and concrete culvert	Will be evaluated prior to construction. If eligible for the CRHR or NRHP, will be avoided by boring or realignment.
PLI 15 /PLI 50	Cole Slough irrigation canal	Will be evaluated prior to construction. If eligible for the CRHR or NRHP, will be avoided by boring or realignment.
PLI 20	Colony Ditch	Will be evaluated prior to construction. If eligible for the CRHR or NRHP, will be avoided by boring or realignment.
PLI 30	Ward Drainage Canal with corrugated metal culvert	Will be evaluated prior to construction. If eligible for the CRHR or NRHP, will be avoided by boring or realignment.
PLI 32	Concrete foundation (9.5' (N/S) by 15.7' (E/W)	Will be avoided by realignment
PLI 33	Kingsburg Branch Canal with concrete culvert/bridge crossing at Mtn. View Ave	Will be evaluated prior to construction. If eligible for the CRHR or NRHP, will be avoided by boring or realignment.
PLI 37	Santa Fe Canal	Will be evaluated prior to construction. If eligible for the CRHR or NRHP, will be avoided by boring or realignment.
PLI 55	Irrigation canal	Will be evaluated prior to construction. If eligible for the CRHR or NRHP, will be avoided by boring or realignment.
PLI 63	Caesar Canal with culvert	Will be evaluated prior to construction. If eligible for the CRHR or NRHP, will be avoided by boring or realignment.
PLI 67	McClanahan Ditch	Will be evaluated prior to construction. If eligible for the CRHR or NRHP, will be avoided by boring or realignment.
PLI 70	Irrigation canal, concrete-lined with concrete culvert	Will be evaluated prior to construction. If eligible for the CRHR or NRHP, will be avoided by boring or realignment.
PLI 77	Irrigation canal with a concrete bridge at RD 60, empties into a small pond west of RD 60	Will be evaluated prior to construction. If eligible for the CRHR or NRHP, will be avoided by boring or realignment.
PLI 81	Irrigation canal (13' wide, 4' deep)	Will be evaluated prior to construction. If eligible for the CRHR or NRHP, will be avoided by boring or realignment.
PLI 85	Mill Creek Ditch (28' wide, 5-6' deep) and concrete culvert (29.5' long by 7.5' wide)	Will be evaluated prior to construction. If eligible for the CRHR or NRHP, will be avoided by boring or realignment.
PLI 88	North Fork irrigation canal (16' wide, 5' deep) and culvert (3' diameter)	Will be evaluated prior to construction. If eligible for the CRHR or NRHP, will be avoided by boring or realignment.
P-54- 002171	Traver Canal	Will be evaluated prior to construction. If eligible for the CRHR or NRHP, will be avoided by boring or realignment.
P-54- 002172	Banks Ditch with recent concrete culvert under Hwy 99.	Will be evaluated prior to construction. If eligible for the CRHR or NRHP, will be avoided by boring or realignment.

Technical Area: Cultural Resources

Data Request 20:

To facilitate a more comprehensive assessment of the proposed project's potential to impact historical resources:

- a. Please provide a list of the potential historical resources found as a result of prior and recent surveys that are in sight of the main plant facility or the new transmission line.
- b. Please have a person who meets the Secretary of the Interior's Professional Qualifications Standards in history or architectural history evaluate which of the resources in that list are historical resources, either individually or as district elements.
- c. Documentation of resources evaluated hereunder need to include California Department of Parks and Recreation 523B forms (Building, Structure, Object Record), and, as appropriate, 523D forms (District Record).
- d. Please provide the resume of each person responsible for each of the above evaluations, if it has not already been provided.
- e. Please assess the degree to which the integrity of the setting of each historical resource that is ultimately found above may be compromised as a result of the project's construction, operation, or maintenance.

Response:

JRP Historical Consulting, LLC, developed the Historic Architectural Study Area (Study Area) for the KCRD CPP in accordance with guidelines developed by the CEC for cultural resources studies, and in consultation with CEC cultural resources staff (Personal Communication between Beverly Bastion, CEC and Rand Herbert, JRP Historical Consultants, dated January 22, 2007). The Study Area was designed to include the project site and a buffer extending a radius of one-half mile from the edges of the parcel containing the proposed plant site, as well as a one-half mile wide buffer on either side of the planned transmission line, except where the proposed transmission line paralleled an existing transmission line, in which case the survey area would only extend to the existing transmission line.

Once the Study Area was defined, JRP staff reviewed previous historical surveys to determine whether any buildings, structures, objects, districts, or sites in or near the Study Area had been previously identified as potential historical resources. No previously designated historic districts or landscapes that qualify as historical resources were identified in or near the Study Area, either as a result of the review of previous surveys or as evaluated under the current survey. Although

the landscape of the Study Area reflects an agricultural heritage that has characterized the region for over a century, it is typical of any number of similar agricultural landscapes that blanket the southern San Joaquin Valley. Furthermore, and perhaps more importantly, the collection of built environment features in and around the Study Area – various standing buildings and structures, irrigation works, roads and other infrastructure – has continued to evolve over time, such that the landscape does not impart a sense of time and place to the early or pioneer period of historical development, namely the decades surrounding the turn of the twentieth century.

Of those parcels located within the Study Area that contain buildings and structures, roughly 90 percent include farm complexes or residences. Of these, however, only two contain residences that were built in the late 1800s, and about 20 contain buildings dating to the 1900-1920 period. This is compared to an estimated 100 parcels that contain buildings and structures built from the 1920s to the present (about half of which are "modern," which for the purposes of this study means built after 1962). Also, in the post-World War II era, there was a trend to build residential properties on smaller lots without an agricultural component. Many of these are located in small subdivisions developed in the 1940s and 1950.

The landscape and built environment has been modified in other ways as well. The half dozen irrigation canals that pass through or near the Study Area have been continually upgraded and modified; for all intents and purposes they are products of the latter half of the twentieth century. Three pioneer-period country schools once located in the Study Area are no longer extant and have been replaced by the Indianola Elementary School, a multiple-unit campus built in the 1950s. Although the early road patterns are more or less the same as during the 1920s, all major county roads have been subsequently paved to modern standards. Manning Avenue, which passes from west to east through the heart of the Study Area, has been expanded to a major fourlane thoroughfare. Other late twentieth-century intrusions to the landscape include a corridor of large transmission towers and the McCall Substation that they serve; the 113-acre County of Fresno Southeast Regional Disposal facility; and a water treatment plant, owned by the City of Parlier. As a result of the cumulative effects of these changes to the built environment, the landscape surrounding the Study Area does not convey an authentic sense of the past, but rather reflects ongoing changes in land use that persist to the present. There does not appear to be any justification for CRHR or NRHP-eligible historic district or landscape in or around the Study Area for this project.

Review of the *Index of Historic Properties in Fresno County*, a listing of properties of local significance administered by the Fresno County Historical Landmarks and Records Advisory



Commission, identified three locally-recognized landmarks that are historical resources for the purposes of the California Environmental Quality Act (CEQA):

- County Historical Landmark #117: Jamieson Residence, a farmhouse built in 1883 at 8601 East South Avenue (JRP Map Reference #70)
- County Historical Landmark #131: Jensen Residence, an early 1900s residence and farm located at 8262 South Bethel Avenue (JRP Map Reference #54)
- County Historical Landmark #185: Avery Residence, an early 1900s residence and farm located at 9280 South Bethel Avenue (JRP Map Reference #2)

In addition to these historical resources, JRP identified a fourth potential historical resource within the Study Area as part of the cultural resources evaluation process for this project:

• Martin Residence, a circa 1894 residence and farm located at 8603 South McCall Avenue (JRP Map Reference #80).

JRP recorded and evaluated each of these resources on California Department of Parks and Recreation 523B forms, attached to the HRIER as Appendix B. The HRIER was submitted to the CEC in September 2007.

This study concludes that the integrity of setting of each of the four historical resources listed above would not be compromised as a result of the project's construction, operation, or maintenance. There would be no substantial adverse change in significance to any of the resources as a result of visual impacts, as discussed below.

<u>Unger/Avery Residence (JRP Map Reference #2)</u>

The ranch house and appurtenant buildings on this parcel are situated approximately one-third of a mile (650 meters) north of the proposed plant site and one-quarter mile (500 meters) east of the proposed transmission line. While the power plant and transmission line would be visible from various locations on the ranch parcel, the residence itself is effectively screened by surrounding trees. Several large oak trees and a row of cypress trees flank the south side of the building, totally obscuring the view to the south toward the power plant site (see Attachment Cul-2 - Photograph 1).

Any visual intrusion to the rest of the parcel would only moderately affect integrity of setting and feeling, but would not affect aspects of location, materials, workmanship, design, or association



of the significant resources on the parcel. This indirect visual impact would not alter in an adverse manner those physical characteristics of the resource that convey its historical significance.

Jensen Residence (Map Reference #54)

The Jensen Residence is located on South Bethel Avenue, approximately one and one-quarter mile (2,000 meters) from the proposed plant site and 500 to 600 meters from the proposed transmission line routes. There will be no visual impact to the resource because large trees on the south and west sides of the contributing buildings and structures block all sightlines to project components (see Attachment Cul-2 - Photographs 2 and 3). Construction of either the plant or the transmission line will not alter the character-defining features of the historic residence for which it was found to be historically significant, nor would they significantly diminish the historic integrity of setting that contributes to the residence's significance.

<u>Jamieson Residence (Map Reference #70)</u>

The Jamieson Residence is located approximately five miles from the proposed plant site and approximately one-third of a mile (630 meters) from the proposed transmission line. As shown in Attachment Cul-2 - Photograph 4, tall, mature trees almost completely surround the residence, and there is an orchard located to the south, between the residence and the transmission line route. Given the considerable distance from the proposed plant site and surrounding trees, there does not appear to be any potential for visual impacts from the plant. Construction of the transmission line will not affect the viewshed because sightlines are screened by the surrounding trees and intervening orchard.

Martin Residence (Map Reference #80)

The Martin Residence is located three miles from the proposed plant site and approximately 500 feet (150 meters) from the proposed transmission line. As shown in Attachment Cul-2 - Photograph 5, tall, mature trees almost completely surround the residence. Given the considerable distance from the proposed plant site and the surrounding trees that completely block sightlines to the plant, there does not appear to be any potential for visual impacts. Although the proposed transmission line may be visible from portions of the rear (northeast corner) of the residence, the visual impact would be minimal. It would have only a minor effect on integrity of setting and feeling, but would not affect aspects of location, materials, workmanship, design, or association, and would not alter the character-defining features of the residence.

JRP Staff Historians Bryan Larson and Mark Beason completed the evaluations of the resources listed above. Mr. Larson holds a B.A. in History from the University of California, Los Angeles, and an M.A. in Public History from California State University, Sacramento. He has been with JRP since 1998 conducting historic survey and evaluation studies. Mr. Beason holds an M.A. in History from Arizona State University and a graduate certificate in Historic Preservation from the University of Colorado at Denver. He has been with JRP since 2006 and has conducted various historic survey and evaluation studies. Based on their level of education and experience, Mr. Larson and Mr. Beason qualify as historian / architectural historian under the United States Secretary of the Interior's Professional Qualification Standards (as defined in 36 Code of Federal Regulations Part 61).

ATTACHMENT CUL-2

Photographs of Historic Resources

Data Request 20 - Photograph Attachments



Photograph 1. Avery/Unger Residence (JRP Map Reference #2). The residence, shown at center, is surrounded by large oak trees and flanked on the south (right side) by a large row of cypress trees. These trees effectively block the sightline to the proposed plant site, which is located about 650 meters to the south, and reduce the visual intrusion of the proposed transmission line, which is would be located approximately 400 meters behind the position of the photographer.



Photograph 2. Jensen Residence (JRP Map Reference #54). View facing southeast. Mature trees, shown at right, block the southern and western sightlines between the residence and project components.



Photograph 3. Jensen Residence (JRP Map Reference #54). View facing northeast showing trees on west (foreground) and south (right) sides of residence.



Photograph 4. Jamieson Residence (JRP Map Reference #70). View facing southwest towards residence, showing surrounding trees and orchards (left) that screen the sightlines toward the proposed transmission line (far left).



Photograph 5. Martin Residence (JRP Map Reference #80). View facing southwest towards residence, showing surrounding trees and orchards (left) that screen the sightlines toward the proposed transmission line (out of frame to the right).

Technical Area: Cultural Resources

Data Request 21:

Please discuss why the appropriate historical theme for the subject conveyances is simply the development of the local agricultural economy in the late nineteenth and early twentieth centuries rather than the development *and* the subsequent operation of the canals through the late 1950's, as agriculture remained the mainstay of the local economy through that time.

Response:

Attachment Cul-3 provides a replacement to Section 5.2.2 in the HRIER, which was previously submitted to the CEC. No changes have been made to the first paragraph; however the second, third and fourth paragraphs should place the second and third paragraphs in the original report.

ATTACHMENT CUL-3

Replacement-HRIER Section 5.2.2

5.2.2. Resources not Eligible for the CRHR

The rural residential / farm properties addressed by this report were evaluated within the context of the residential and agricultural development of the area during the late nineteenth and early twentieth century (Criteria A and 1). By the turn of the twentieth century, settlement and agricultural patterns that characterize this rural part of southern Fresno County had been firmly established. The four properties described above in Section 5.2.1 are early and intact examples that best represent the pioneer era of this important theme. The remaining farmsteads and rural residential properties addressed in this study were part of the typical semi-rural residential and agricultural land uses that existed in this area throughout most of the twentieth century. These properties did not play a distinctly important role in the development of small agricultural operations in the Study Area and they do not have important associations with events that have made a significant contribution to the broad patterns of local or regional history. In addition, research conducted for this project did not suggest that any of these properties are associated with the lives of persons important to our past, as defined by Criteria B and 2. None of the properties appear to embody the distinctive characteristics of a type, period, or method of construction, nor do they represent the work of a master or possess high artistic value (Criteria C and 3). Finally, the remaining resources within the Study Area have not yielded, nor will likely yield, important information for history (Criteria D and 4).

There are five irrigation canals that pass through the Study Area for this project: the Selma Branch of the Centerville and Kingsburg Canal (Map Reference #90), completed in 1878; Walnut Ditch (Map Reference #91), built circa 1891; the Kirby Ditch (Map Reference #92) and Kirby Canal (Map Reference #94), built in 1882 and divided into two individual canals in the mid-twentieth century; and the Fowler Switch Canal (Map Reference #93), built in 1883. With the exception of the Walnut Ditch, a secondary canal that was built relatively late in the era of irrigation development, all of the water conveyances studied herein made significant contributions to the development of southern Fresno County. The Selma Branch of the Centerville and Kingsburg Canal, the Kirby Ditch, the Kirby Canal, and the Fowler Switch Canal, all major water conveyances built during the 1870s and early 1880s, were among the first irrigation canals to reach Fowler and Selma and their surrounding agricultural districts. Without these early and major canals, the development of intensive agriculture on small parcels that characterizes the Study Area would not have been possible. These canals, therefore, have the potential for significance under Criteria A and 1 for associations with agricultural developments in southern Fresno County, provided that they retain integrity to the period in which they achieved their significance.

Establishing a defensible period of significance for irrigation canals can be challenging because their importance to the local agricultural and economic underpinnings of communities they serve continues to the present. In this way, irrigation systems and their individual components are similar to a number of public works projects including state and local road systems, railroads, municipal water and sewer systems, and other major utility systems. As members of a class of infrastructure that delivers benefits to broad constituencies, irrigation canals have become vital, indispensable elements of their local communities and economies. They are also common elements of the landscape, particularly in the Central Valley where they can be found everywhere that crops are cultivated. These considerations are useful in appreciating how significance should be assessed for such properties because, in a sense, every example of this type could be described as important.

Following National Register guidelines, the period of significance under Criterion A (1) should cover the span of time in which the property made significant contributions to the broad patterns of our history.1 The guidelines further state that "continued use or activity does not necessarily justify continuing the period of significance. The period of significance is based upon the time when the property made the contributions or achieved the character on which significance is based."2 For the irrigation canals studied here, their potential for significance lies with their role in the transformation of the agricultural character of southern Fresno County from an arid plain devoted to stockraising and dry farming to the intensively farmed district that it is today. Their period of significance should be restricted to the time frame that this change took place. As discussed in the historic context above, within the Study Area this important historical trend began in the late 1870s and early 1880s with the construction of the Centerville and Kingsburg Canal, the Fowler Switch, and other canals. This trend culminated by the turn of the twentieth century, by which time the Study Area had been transformed into the growing region that it is today: irrigated farms on relatively small parcels primarily devoted to raisin culture. The period of significance for the four potentially eligible canals evaluated as part of this study, then, would begin with the year that they were built and end about 1900.

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¹ USDI, NPS, "How to Apply the National Register Criteria for Evaluation," 12-13.

² USDI, NPS, "How to Complete the National Register Registration Form," *National Register Bulletin 16A* (Washington, D.C.: Government Printing Office, 1990), 42.

Technical Area: Cultural Resources

Data Request 22:

Of the 17 water conveyance segments that Pacific Legacy found, please clarify:

- a. Which are parts of the five named conveyances that JRP evaluated, and identified as parts of the Consolidated Irrigation District system.
- b. Which are parts of the Consolidated Irrigation District system while being distinct from the five named conveyances that JRP considers.
- c. Which, if any, are conveyances that operate apart from the Consolidated Irrigation District system.

Response:

Pacific Legacy recorded 17 newly identified irrigation canal features and updated two previously recorded irrigation canal features for a total of 19 resources. Of the 17 newly identified irrigation canals, three of these were also located within the view shed of the plant site or overhead transmission line and were thus evaluated by JRP. Two additional irrigation canals were located within the view shed of the plant site and/or transmission line and were evaluated by JRP but were located beyond the archaeological survey corridor and were thus not recorded by Pacific Legacy. Therefore, there are a total of 21 irrigation resources within the project area, 5 of which were evaluated by JRP. The remaining 16 unevaluated irrigation canals are beyond the view shed of the plant and/or overhead transmission lines but within the water and/or gas pipeline survey corridors. However, the project area survey corridors were wider than the ADI for installing the gas and water pipelines. The installation and maintenance of these project components will avoid impacting these existing irrigation features. The 16 unevaluated irrigation features will be evaluated prior to project construction. If any of these perpendicular linear resources are determined to be eligible for listing on the CHHR or NRHP, the pipeline will either be realigned or the pipeline will be constructed by boring to avoid impacting the resource. Thus, resource avoidance will occur through a combination of directional boring under linear feature crossings and/or realignment of pipeline routes paralleling linear resources. The 16 unevaluated irrigation features are likely part of the Consolidated Irrigation District system, but since evaluation has yet to be conducted, their exact association is presently unknown. The following table contains a list of canal features identified by both Pacific Legacy and JRP.

JRP Map Reference Number	Pacific Legacy Field Designation or Primary Number*	Description	Year Built	Eligible for CRHR or NRHP	Location within Project Area
JRP 90	PLI-2, PLI-8 & PLI-13	Selma Branch of the Centerville and Kingsburg Canal	1878	No	View shed of plant site or transmission line
JRP 91	PLI-9	Walnut Ditch	ca. 1891	No	View shed of plant site or transmission line
JRP 92	PLI-10	Kirby Ditch	1882	No	View shed of plant site or transmission line
JRP 93	n/a	Fowler Switch Ditch	1883	No	View shed of plant site or transmission line
JRP 94	n/a	Kirby Canal	1882	No	View shed of plant site or transmission line
n/a	PLI- 14	Harp Ditch	?	Will be evaluated prior to construction. If determined eligible for listing on the CRHR or NRHP, will be avoided by boring or realignment.	Within water pipeline ROW
n/a	PLI-15 & PLI- 50	Cole Slough Canal	?	Will be evaluated prior to construction. If determined eligible for listing on the CRHR or NRHP, will be avoided by boring or realignment.	Within water & gas pipeline ROW
n/a	PLI-20	Colony Ditch	?	Will be evaluated prior to construction. If determined eligible for listing on the CRHR or NRHP, will be avoided by boring or realignment.	Within gas pipeline ROW
n/a	PLI-30	Ward Drainage Canal	?	Will be evaluated prior to construction. If determined eligible for listing on the CRHR or NRHP, will be avoided by boring or realignment.	Within gas pipeline ROW
n/a	PLI-33	Kingsburg Branch Canal	?	Will be evaluated prior to construction. If determined eligible for listing on the CRHR or NRHP, will be	Within gas pipeline ROW



JRP Map Reference Number	Pacific Legacy Field Designation or Primary Number*	Description	Year Built	Eligible for CRHR or NRHP	Location within Project Area
				avoided by boring or realignment.	
n/a	PLI-37	Santa Fe Canal	?	Will be evaluated prior to construction. If determined eligible for listing on the CRHR or NRHP, will be avoided by boring or realignment.	Within gas pipeline ROW
n/a	PLI-55	Unknown Irrigation Canal	?	Will be evaluated prior to construction. If determined eligible for listing on the CRHR or NRHP, will be avoided by boring or realignment.	Within gas pipeline ROW
n/a	PLI-63	Caesar Canal	?	Will be evaluated prior to construction. If determined eligible for listing on the CRHR or NRHP, will be avoided by boring or realignment.	Within gas pipeline ROW
n/a	PLI-67	McClanahan Ditch	?	Will be evaluated prior to construction. If determined eligible for listing on the CRHR or NRHP, will be avoided by boring or realignment.	Within gas pipeline ROW
n/a	PLI-70	Unknown Irrigation Canal	?	Will be evaluated prior to construction. If determined eligible for listing on the CRHR or NRHP, will be avoided by boring or realignment.	Within gas pipeline ROW
n/a	PLI-77	Unknown Irrigation Canal	?	Will be evaluated prior to construction. If determined eligible for listing on the CRHR or NRHP, will be avoided by boring or realignment.	Within gas pipeline ROW
n/a	PLI-81	Unknown Irrigation Canal	?	Will be evaluated prior to construction. If determined eligible for listing on the Register, resource will be avoided by boring.	Within gas pipeline ROW

Comprehensive Irrigation Canal Features Identified by both JRP and Pacific Legacy Surveys (n=21)							
JRP Map Reference Number	Pacific Legacy Field Designation or Primary Number*	Description	Year Built	Eligible for CRHR or NRHP	Location within Project Area		
n/a	PLI-85	Mill Creek Ditch	?	Will be evaluated prior to construction. If determined eligible for listing on the CRHR or NRHP, will be avoided by boring or realignment.	Within gas pipeline ROW		
n/a	PLI-88	North Fork Irrigation Canal	?	Will be evaluated prior to construction. If determined eligible for listing on the CRHR or NRHP, will be avoided by boring or realignment.	Within gas pipeline ROW		
n/a	P-54-002171	Traver Canal – previously recorded. Recently updated by PLI.	?	Will be evaluated prior to construction. If determined eligible for listing on the CRHR or NRHP, will be avoided by boring or realignment.	Within gas pipeline ROW		
n/a	P-54-002172	Banks Ditch – previously recorded. Recent update by PLI.	?	Will be evaluated prior to construction. If determined eligible for listing on the CRHR or NRHP, will be avoided by boring or realignment.	Within gas pipeline ROW		
*multiple designation denote various sections of same linear feature							



Technical Area: Cultural Resources

Data Request 23:

To facilitate a more explicit assessment of the proposed project's potential to impact individual water conveyances and water conveyance districts that are historical resources:

- a. Please have a person who meets the Secretary of the Interior's Professional Qualifications Standards in history or architectural history evaluate any of the conveyances above which are in sight of the main plant facility or the new transmission line as either individual conveyance resources, or as contributing elements to Consolidated Irrigation Canal or Consolidated Irrigation District historic districts.
- b. Documentation for the evaluation of any such resources needs to include California Department of Parks and Recreation 523B forms (Building, Structure, Object Record), and, as appropriate, 523D forms (District Record).
- c. Please provide the resume of each person responsible for each evaluation, if it has not already been provided.
- d. Should the above evaluation result in the recognition of a historical resource not previously considered here, a new individual conveyance or a new conveyance district, please assess the degree to which the integrity of the setting of each such historical resource may be compromised as a result of the project's construction, operation, or maintenance.

Response:

Only the five irrigation features evaluated by JRP (three of which were also recorded by Pacific Legacy) are within the view shed of the plant and/or overhead transmission line.

None of the five irrigation features warranting evaluation (since they were in the project view shed) were recommended as eligible (see the HRIER which was submitted to the CEC in September 2007). These resources were documented and detailed on appropriate DPR forms. The remaining 16 irrigation features within the Pacific Legacy project survey corridor, but beyond the ADI for buried pipeline installation, were not evaluated as they will not be impacted by the KRCD CPP.

Technical Area: Hazardous Materials Management

Data Request 24:

Please provide information on the location and the identities/quantities of hazardous materials stored at any facility located or proposed to be located within a 1-mile radius of the proposed power plant. If there are no facilities either in existence or proposed to be built, please so indicate.

Response:

A request for this information was previously submitted to the Fresno County Department of Community Health. On January 18, 2008, Mr. Glenn Allen, Fresno County Environmental Health Specialist responded with a letter identifying the following six facilities:

- Gullian Farming Equipment, 13000 E Manning Avenue, Parlier
- Nextel-Comm-Parlier #361, 12949 E Manning Avenue, Parlier
- Tiger Auto Sales, 13069 E Manning Avenue, Parlier
- Southeast Regional Disposal, 12716 E Dinuba, Selma
- Huntsman Avenue Inert Waste Landfill, 12253 E Huntsman, Selma
- Bethel Ave Disposal Site, 10758 S Bethel Avenue, Selma

A copy of the letter is included as Attachment Haz Mat-1. On February 7, 2008 follow-up discussions were held with Ms. Sandy Allen and Mr. Ted Piearcy of Fresno County regarding the types and quantities of hazardous materials for these six facilities. Ms. Allen indicated that all six facilities had completed either Form 2240 or 2246. The former indicates that the facility holds amounts of hazardous materials below the reporting quantity thresholds and the latter indicates the facility is an un-manned site that holds amounts of hazardous materials below the reporting quantity thresholds. Mr. Piearcy confirmed the reporting thresholds as 55 gallons, 200 cubic feet or 500 lbs.

Although these six facilities, which are within 1-mile of the KRCD CPP, are required to file forms indicating their storage/use of hazardous materials, the quantities involved are less than significant (i.e., less than the reporting thresholds), and therefore information about the types and amounts of hazardous materials at these facilities is not available from the Department of Community Health, which is responsible for tracking this information.

Note that as discussed in AFC Section 8.8.3.5 (Hazardous Materials) AFC, there will be no significant off-site impacts from any accidental releases of hazardous materials stored and used at the project site. Consequently, there will be no off-site cumulative impact.

ATTACHMENT HAZ MAT-1

Letter from Fresno County



County of Fresno

Department of Community Health Edward L. Moreno, M.D., M.P.H., Director-Health Officer

January 18, 2008

999999999 LU0014188 PE 2600

Thor Hibbeler 1910 Fell San Francisco, CA 94117

Dear Mr. Hibbeler:

SUBJECT: Kings River Conservation District Community Power Project Hazardous

Material Locations Within 1-Mile Of Proposed Project Site.

LOCATION: 9664 S. Bethel Avenue, Parlier. APN # 358-031-33

This Department has record of six known facilities that may be within one mile of the proposed project site that contains or handles hazardous or acutely hazardous materials. (See enclosed map) The facilities are:

Gullian Farming Equipment, 13000 E. Manning Avenue, Parlier Nextel Comm-Parlier #361, 12949 E. Manning Avenue, Parlier Tiger Auto Sales, 13069 E. Manning Avenue, Parlier Southeast Regional Disposal, 12716 E. Dinuba, Selma Huntsman Ave Inert Waste Landfill, 12253 E. Huntsman, Selma Bethel Avenue Disposal Site, 10758 S. Bethel Avenue, Selma

In order to determine material types and quantities at each of the indicated facilities you will need to complete an independent file review of the subject facility files maintained by this Department. You may contact the Certified Unified Program Agency at (559) 445-3271 for more information.

If I can be of further assistance, please contact me at (559) 445-3357.

Glenn Allen, R.E.H.S.

Environmental Health Specialist III

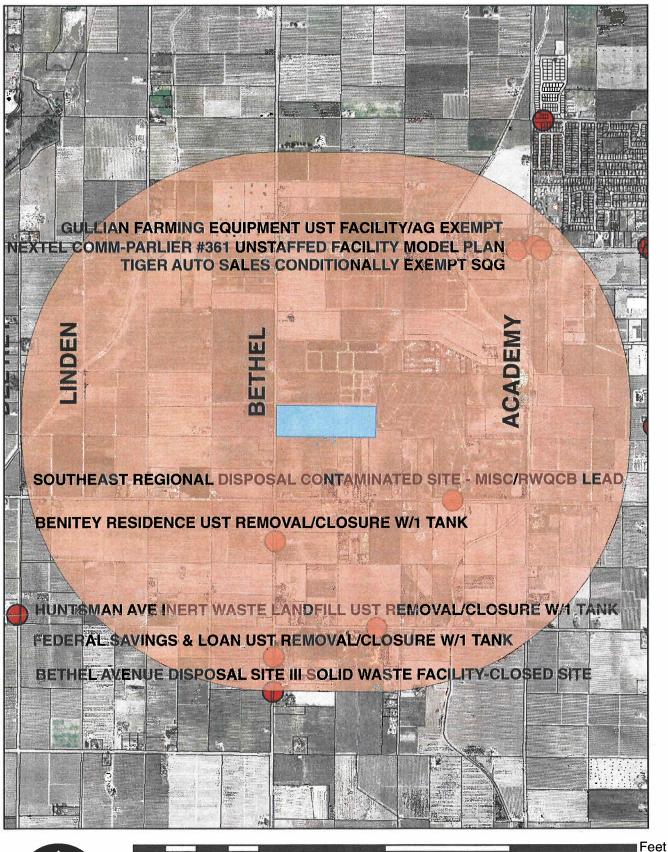
Environmental Health Division

ga

cc: Vince Mendes, Environmental Health Division (CT 6801)

KRCD Community Power Project 1-Mile Haz Mat Request

KRCD Community Power Plant 1-Mile Haz Mat Radius



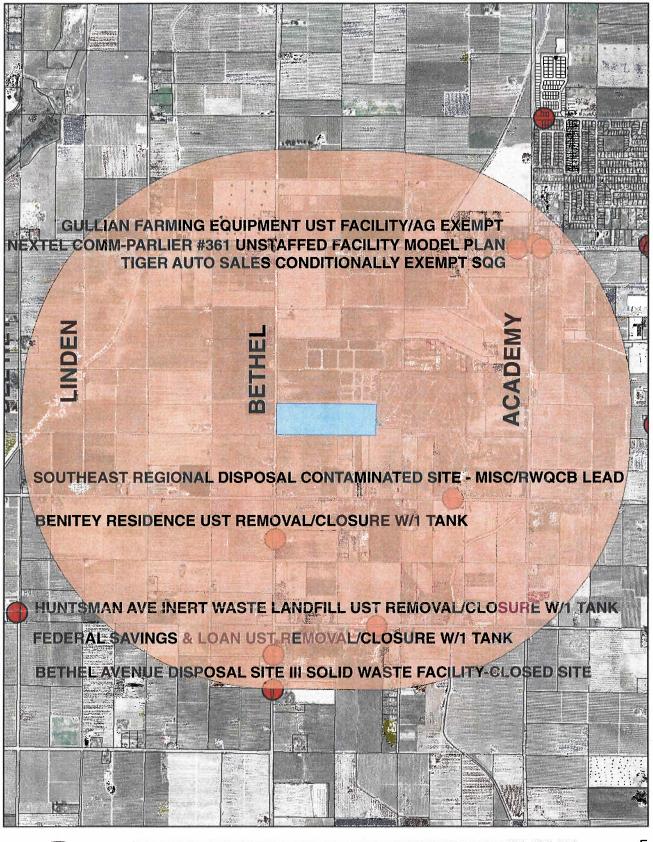


1,300 2,600 5,200

7,800

10,400

KRCD Community Power Plant 1-Mile Haz Mat Radius





Feet 0 1,300 2,600 5,200 7,800 10,400

Technical Area: Land Use

Data Request 25:

Please provide written confirmation from Fresno County as to whether the project would need a conditional use permit, variance, or any other land use entitlement from the County but for the exclusive authority of the Energy Commission.

Response:

As described in AFC Section 8.4-Land Use, pages 14 to 21, Government Code Section 53091 governs the applicability of building and zoning ordinances to electrical generation facilities. Subparagraph (d) of that section makes it clear that building ordinances of a county or city do not apply to the location or construction of electrical energy generation facilities for a local agency. Subparagraph (e) also says that zoning ordinances of a county or city do not apply to such facilities. KRCD, as a local public agency, is exempt from the conditional use permit (CUP) process and is not required to comply with city or county building or zoning ordinances for the KRCD CPP. Therefore, the KRCD CPP will not require a CUP, variance or any other land use entitlement from Fresno County.

Technical Area: Land Use

Data Request 26:

Please provide written confirmation from Fresno and Tulare counties as to what use permits or land use entitlements they would require for offsite linear facilities, but for the exclusive authority of the Energy Commission.

Response:

Please see response to Data Request 25. KRCD has requested written confirmation from the Fresno and Tulare County Counsel's Offices.

Technical Area: Land Use

Data Request 27:

If the project would need a conditional use permit, please provide the conditions, if known, that Fresno County would place on the project or provide a timeline as to when these conditions would become available to staff.

Response

Technical Area: Land Use

Data Request 28:

Please provide written confirmation from Fresno County whether, in the County's opinion, a variance could be granted and, if so, what conditions Fresno County would require, were it the permitting agency.

Response

Technical Area: Land Use

Data Request 29:

Please provide Fresno County's position on the proposed project's consistency with its General Plan and Zoning Ordinance.

Response

Technical Area: Land Use

Data Request 30:

Please cite the section(s) of the zoning or other code that state the findings the County would make for a variance or variances, were it the permitting agency.

Response

Technical Area: Land Use

Data Request 31:

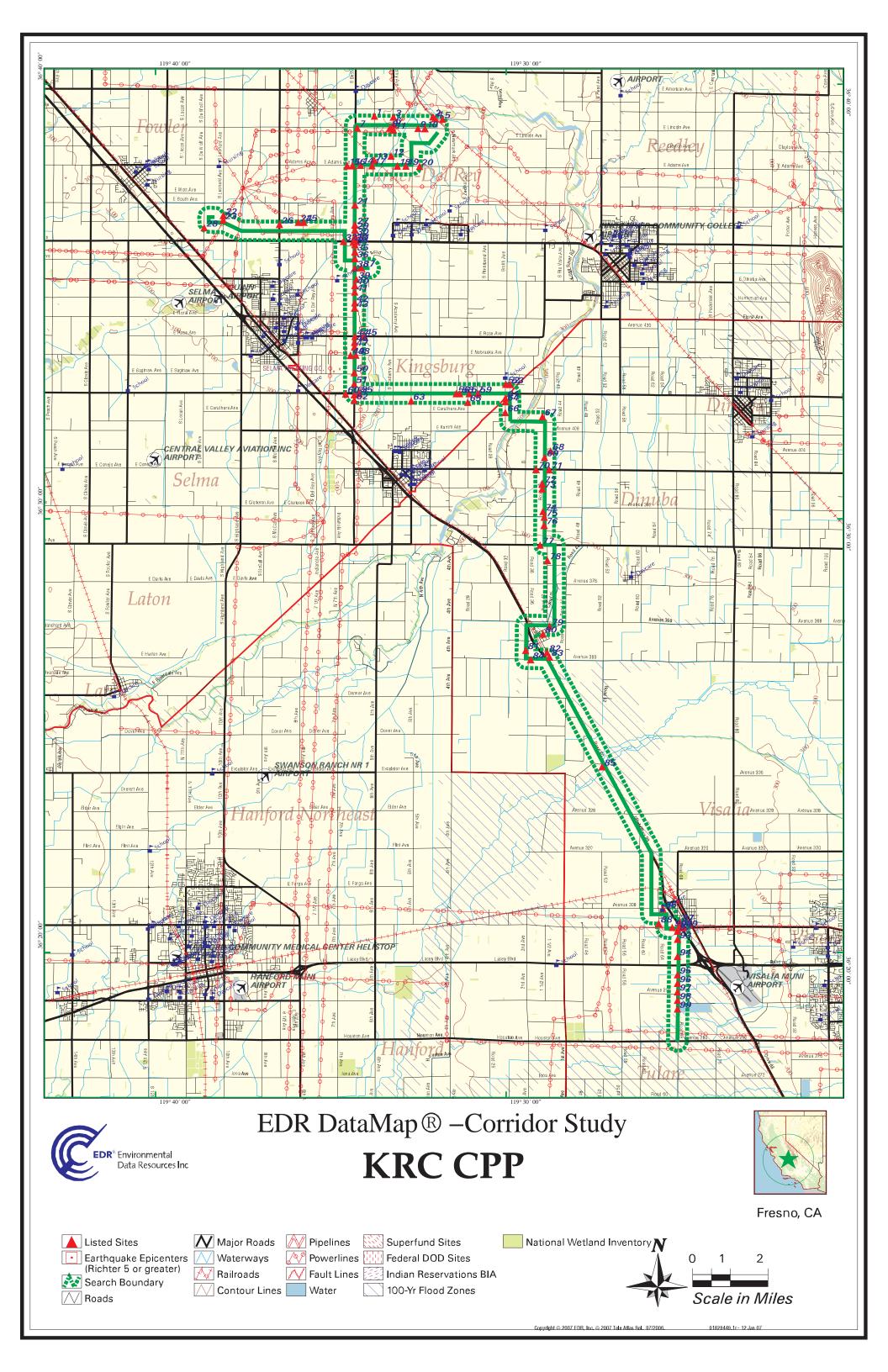
Please provide a figure(s) and descriptive labels or text identifying sensitive receptors within 200 feet of the centerline of linears and any associated appurtenances.

Response

Included as Attachment Land Use-1 is a map of the KRCD CPP project which identifies sensitive receptors in the area.

ATTACHMENT LAND USE-1

Map Showing Sensitive Receptors



Technical Area: Land Use

Data Request 32:

Please describe what temporary fill or paving would be used and at what locations.

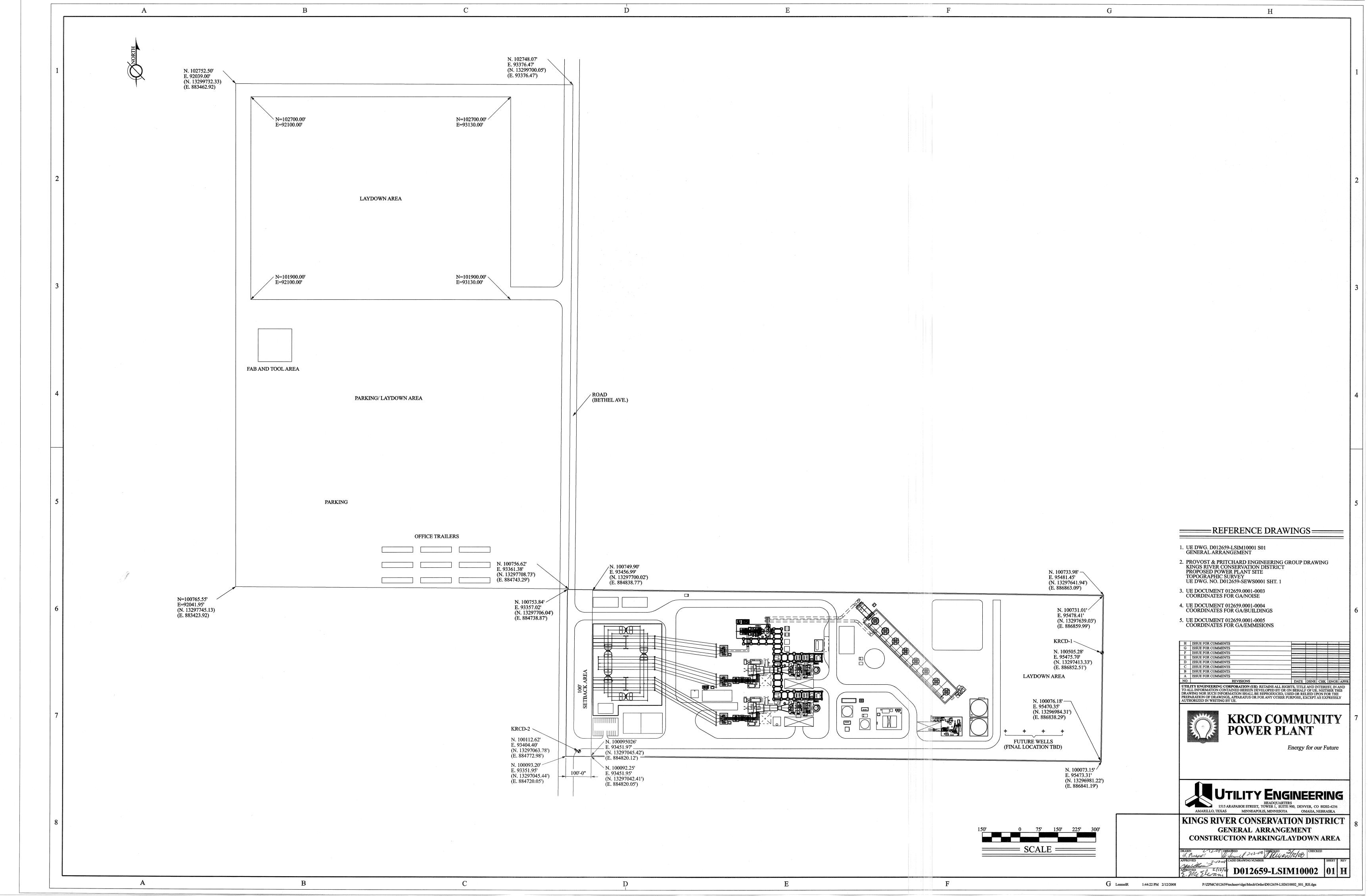
Response:

Temporary surface improvements will be made to the parking and laydown areas shown on AFC Figure 2-2, General Arrangement – Construction Parking and Laydown Areas. Figure 2-2 has been revised to include a new construction parking and staging area located on the west side of Bethel Avenue and to the northwest of the KRCD CPP project site. Revised Figure 2-2 is included as Land Use-2. This new parking and staging area is being added to the KRCD CPP. KRCD is completing an engineering and environmental analysis of this new staging area which will be submitted to the CEC in late March 2008.

For the parking and laydown areas, engineered fill will be placed and compacted in accordance with the geotechnical report (see AFC Appendix 2-7-Geotechnical Design Criteria). Engineered fill will either be the on-site native soils (non-topsoil) or imported soil fill. The fill will be covered with a layer of gravel to provide a stable mud-free surface.

ATTACHMENT LAND USE-2

Revised Figure 2-2



Technical Area: Land Use

Data Request 33:

Please describe what methods would be used to restore temporarily-used sites to their former condition after construction of the project is complete.

Response:

Construction equipment such as bulldozers, graders and/or front end loaders will used to remove the temporary gravel and structural fill. The exposed surface will be scarified, covered with a layer of topsoil, and replanted with vegetation in accordance with the draft Drainage Erosion and Sediment Control Plan (DESCP) that is being prepared in response to Data Request 70.

Technical Area: Land Use

Data Request 34:

Please describe whether, outside of the foot print of project facilities, what practices (such as agriculture) would be permitted within the rights-of-way.

Response:

For the proposed transmission line right-of-way, land uses would only be limited to those uses that are not inconsistent with transmission line safety and are consistent with transmission line use. For example, no large metal structures would be permitted near or in the transmission line right-of-way for safety reasons. Land along the transmission line right-of-way, that is currently used for agricultural purposes would be expected to remain agriculture. Also land in the transmission line right-of-way that is not currently being used for agricultural uses, could be used for agricultural uses after the proposed transmission line is constructed. With regards to the natural gas and water pipeline routes, there would be no limits to uses in these rights-of-way.

Technical Area: Land Use

Data Request 35:

Please explain on what basis the proposed ratio of preserved to occupied (built upon) agricultural land was determined.

Response:

Lacking any established planning criteria for Fresno County, the 1:1 ratio was proposed as being equitable. KRCD is willing to work with local agencies and the CEC to determine a reasonable and equitable funding to offset for the conversion of agricultural land for the KRCD CPP. It is important to note, however, that KRCD CPP site is adjacent to the Parlier wastewater treatment plant, is likely to be within the sphere of influence of the City of Parlier and is currently not providing a high agricultural value. One of the goals of any offsetting program should be to apply the agricultural preservation funds to areas that can sustain high value productive agriculture and avoid development pressure. See response to Data Request 37 for additional information.

Technical Area: Land Use

Data Request 36:

If funds will be provided to a Trust for farmland preservation, please discuss how KRCD will ensure that the funds will be sufficient to acquire the amount of land that may be agreed upon by the Energy Commission.

Response:

Determination of the funds to be set aside for future purchase of agricultural preserve lands are proposed to be determined by a negotiation between KRCD and the local planning authorities, subject to the CEC's approval.

Technical Area: Land Use

Data Request 37:

Please identify whether preservation of agricultural land by the applicant or other party would be within Fresno County.

Response:

Any agricultural land preservation set aside for KRCD CPP would be located within Fresno County.

Since initiation of the planning for KRCD CPP, the Fresno County Council of Governments (COG) has undertaken preparation a Model Agricultural Lands Preservation Plan that is scheduled to be published in the 3rd quarter of 2008. This Model is intended to be incorporated in a Fresno County preservation program some time in the future. It is likely that the KRCD CPP project site will not be identified as agriculture land to be preserved in the COG study because of its proximity to the cities of Parlier and Selma, and pending inclusion in the planning Sphere of Influence of the City of Parlier and its location immediately adjacent to the Parlier wastewater treatment plant, which would likely be expanded if the KRCD CPP was not constructed. KRCD believes that an agricultural land set aside mitigation should conform to the Model.

A current Fresno COG effort to develop open space buffers between the 16 cities in Fresno County may provide an opportunity for KRCD agricultural preservation funds to be applied to that effort. KRCD proposes that it continue to confer with the local communities and Fresno County to determine how to best apply its agricultural preservation funds that would most best benefit the ongoing efforts within the County.

Technical Area: Land Use

Data Request 38:

Please explain how the economic viability of any preserved agricultural land would be assured.

Response:

In general the economic viability of any agricultural land can not be assured by KRCD, or anyone. However, the ability to provide a sustained agricultural benefit would be dependent on coordination with the County's efforts to set aside land that will be less subject to future development pressure.

Technical Area: Land Use

Data Request 39:

Please identify whether any preserved land would be adjacent to already preserved land such that together they would provide a larger agricultural unit.

Response:

Technical Area: Land Use

Data Request 40:

Please document any discussions or other communication with the County regarding the preservation of farmland and any determinations or suggestions that resulted.

Response:

As discussed above in the response to Data Request 37, Fresno County is in the very early stages of developing an agricultural land preservation program. Ongoing communications with Fresno County Planning Department and the Fresno Council of Governments are planned and will be documented with the CEC.

Technical Area: Land Use

Data Request 41:

Please identify the criteria by which land for preservation would be identified and acquired.

Response:

Criteria for identification and acquisition of agricultural preservation lands are expected to be identified in the COG Model Preservation Program mentioned in the response to Data Request 37 and the subsequent Fresno County laws, ordinances, regulations and standards for Agricultural Land Preservation.

Technical Area: Land Use

Data Request 42:

Please identify the tax implications, if any, for local jurisdictions and the State if preserved land is owned by a non-profit organization.

Response:

Tax implications relating to ownership of preserved agricultural land would be an issue to be addressed by the Fresno COG Model Land Preservation Program (discussed in the response to Data Request 37) and the Fresno County Board of Supervisors when a formal preservation program is adopted. It is premature and in appropriate for KRCD to attempt to comment on this at this time.

Technical Area: Socioeconomics

Data Request 43:

Please indicate the year for all economic estimates (e.g., construction costs, construction and operation payroll, property taxes, school impact fees, etc.).

Response:

The dollar values are provided in nominal dollars (i.e. the year they occur) and do not need to be adjusted for inflation. With respect to the annual impacts related to plant operation, they correspond to the first year of plant operation (2011).

Technical Area: Socioeconomics

Data Request 44:

Please discuss whether the CPP, which would be owned by the Kings River Conservation District (KRCD), a multi-county special district public agency that provides resource conservation, would be liable for paying property taxes to Fresno County.

Response:

KRCD does not have to pay property taxes because it is a special district public agency. Because KRCD would own the KRCD CPP and the property, the KRCD CPP would not be liable for paying property taxes.

Technical Area: Socioeconomics

Data Request 45:

If the KRCD would be required to pay property taxes, please verify the dollar amount.

Response:

Please see response to Data Request 44.

Technical Area: Socioeconomics

Data Request 46:

Please discuss whether the CPP, would be liable for paying school impact fees to the Selma Unified School District and the Parlier Unified School District.

Response:

The KRCD CPP would not be liable for paying school impact fees to the Selma Unified School District or the Parlier Unified School District because it would be owned by KRCD, a special district public agency that is not liable for paying these types of fees.

Technical Area: Socioeconomics

Data Request 47:

If the KRCD would be required to pay school impact fees, please verify the dollar amounts.

Response:

Please see response to Data Request 46.

Technical Area: Socioeconomics

Data Request 48:

Please provide the number of annual short-term (contract) operation workers

Response:

KRCD is currently working on this Data Request and expects to file a response in March 2008.

Technical Area: Socioeconomics

Data Request 49:

Please verify whether the estimates of employment and income secondary economic impacts included short-term (contract) operation workers with an annual payroll of \$250,000 or not.

Response:

KRCD is currently working on this Data Request and expects to file a response in March 2008.

Technical Area: Socioeconomics

Data Request 50:

If not, please recalculate the secondary employment and income secondary impacts for operations in Fresno County.

Response:

KRCD is currently working on this Data Request and expects to file a response in March 2008.

Technical Area: Transmission System Engineering

Data Request 51:

The generator tie-lines for the project have been described in the Application For Certification sections 1.3 and 2.6 as a five mile long, radial line, which would be built with 2156 kcmil ACSR conductor. The SIS indicates the project would use two generator tie-lines which would be built with 795 kcmil ACSS conductor. Please clarify conductor type, size, and number of generator tie-lines which would require interconnecting the CPP project to the PG&E McCall Substation.

Response:

The reference to 2156 thousand circular mil (kcmil) appears in AFC Sections 2.6 and 4.2. The 2156 kcmil reference is incorrect. Use of 2156 kcmil conductor would result in excess capacity and cost. The 795 kcmil reference in the System Impact Study (SIS) is correct. To clarify, the interconnection of the KRCD CPP to the PG&E McCall Substation will require two 230 kV circuits, each using three conductors, each conductor consisting of 795 kcmil aluminum conductor steel supported (ACSS) as described in the SIS.

Technical Area: Transmission System Engineering

Data Request 52:

The SIS indicated that the San Joaquin Valley Energy Center project (SJVEC) is ahead of the CPP in the California ISO generation queue. Having included the SJVEC in the study assumptions, the addition of the CPP will cause overload on the 70 kV, 115 kV, and 230 kV transmission line which will require a 187.57 miles of line reconductoring. Without the SJVEC project, the addition of the CPP will require the reconductoring of 53.5 miles of 70 kV, 115 kV, and 230 kV lines. Please provide an environmental analysis sufficient to meet CEQA requirements for an indirect project impact of the required transmission line reconductoring both with and without the SJVEC project.

Response:

Since the AFC was filed in late September 2007, the San Joaquin Valley Energy Center project (SJVEC) has dropped out of the California Independent System Operator (CAISO) generation queue. A copy of the latest CAISO interconnection queue is included as Attachment TSE-1. With the SJVEC out of the CAISO queue, only 53.5 miles of line reconductoring is required per the SIS. In addition, PG&E has subsequently determined that some of this line reconductoring is already underway as part of other PG&E system improvements. The final number and location of the necessary line reconductorings will be identified in a revised Facilities Study Plan which PG&E expects to issue in late February 2008. Once this final list is identified, KRCD will work closely with PG&E to obtain access to the necessary easements and rights-of-way to allow environmental analysis sufficient to meet California Environmental Quality Act (CEQA) requirements for an indirect project impact of the required transmission line reconductorings.

ATTACHMENT TSE-1

CAISO Interconnection Queue

The California ISO Controlled Grid Generation Queue as of: January 25, 2008

Queue Position Interconnection Request Receive Date Queue Date 1 9/30/1998 9/30/1998 1A 11/1/1999 11/1/1999 2 8/10/1999 2/3/2000 3 4/21/2000 6/14/2000 4 8/8/2000 8/8/2000 5 8/9/2000 8/9/2000 6 8/23/2000 8/9/2000 7 8/16/2000 10/6/2000 8 11/28/2000 11/28/2000 9 12/14/2000 12/14/2000 10 5/2/2001 5/2/2001 11 10/14/2002 10/23/2002 12 12/16/2002 12/16/2002 13 1/3/2003 1/3/2003 14 1/7/2003 1/7/2003 15 42/34/2002 4/14/7/2003 16 3/11/2003 3/11/2003 17 3/18/2003 4/14/2003 19 6/4/2003 6/18/2003 20 8/19/2003 9/4/2003 21 10/3/2003	Application Status Active Active Active Complete Withdrawn 9/14/06 Active Active Active Active Active Active	Type WT CC CC CC CC CC CC	Fuel W NG NG	Summer	Winter	County							_			
1A 11/1/1999 11/1/1999 2 8/10/1999 2/3/2000 3 4/21/2000 6/14/2000 4 8/8/2000 8/8/2000 5 8/8/2000 8/9/2000 6 8/23/2000 8/9/2000 7 8/16/2000 10/6/2000 8 11/28/2000 11/28/2000 9 12/11/2000 11/28/2000 140 5/2/2001 5/2/2001 11 10/14/2002 10/23/2002 12 12/16/2002 12/16/2002 13 1/3/2003 1/3/2003 14 1/7/2003 1/3/2003 15 42/31/2002 11/1/2003 16 3/311/2003 3/18/2003 17 3/18/2003 3/18/2003 18 4/16/2003 4/16/2003 19 6/4/2003 9/4/2003 20 8/19/2003 10/23/2003 21 10/3/2003 10/23/2003	Active Active Active Complete Withdrawn 9/14/06 Active Active Active	CC CC CC	NG NG	16.5			State	Utility	Station or Transmission Line	Proposed On-line Date (as filed with IR)	Current On-line Date	Feasibility Study (IFS)	System Impact Study (SIS)	Facility Study (FAS)	Optional Study (OS)	Interconnection Agreement Status
2 8/10/1999 2/3/2000 3 4/21/2000 6/14/2000 4 8/8/2000 8/8/2000 5 8/9/2000 8/9/2000 6 8/23/2000 8/9/2000 7 8/16/2000 10/6/2000 8 11/28/2000 11/28/2000 9 12/1/2000 11/28/2000 10 5/2/2001 5/2/2001 11 10/14/2002 10/23/2002 12 12/16/2002 12/16/2002 13 1/3/2003 1/3/2003 14 17/2003 1/7/2003 15 12/3/2002 11/1/2003 16 3/11/2003 3/14/2003 17 3/18/2003 3/18/2003 18 4/16/2003 6/18/2003 20 8/19/2003 9/4/2003 21 10/3/2003 10/23/2003 22 11/18/2003 10/23/2003	Active Active Complete Withdrawn 9/14/06 Active Active Active	CC CC	NG			Riverside	CA	SCE	Devers-Garnet 115 kV line (Tap)	3/1/1999	9/1/2007	NA	Complete	Complete		
3 4/21/2000 6/14/2000 4 8/8/2000 8/8/2000 5 8/9/2000 8/9/2000 6 8/23/2000 8/9/2000 7 8/16/2000 10/6/2000 8 11/28/2000 11/28/2000 9 12/1/2000 12/1/2000 11 05/2/2001 5/2/2001 11 10/14/2002 10/23/2002 12 12/16/2002 12/16/2002 13 1/3/2003 1/3/2003 14 17/2003 1/7/2003 16 3/11/2003 3/14/2003 16 3/11/2003 3/18/2003 17 3/18/2003 4/15/2003 18 4/15/2003 6/18/2003 20 8/19/2003 9/4/2003 21 10/3/2003 10/23/2003 21 10/3/2003 10/23/2003	Active Complete Withdrawn 9/14/06 Active Active Active	CC CC		550	550	San Diego	CA	SDGE	Miguel Substation	3/1/2002	1/1/2008	N/A	Complete	Complete		IA Executed
4 8/8/2000 8/8/2000 5 8/9/2000 8/9/2000 6 8/23/2000 8/23/2000 7 8/16/2000 10/6/2000 8 11/28/2000 11/28/2000 9 12/1/2000 12/1/2000 10 5/2/2004 5/2/2004 11 10/14/2002 10/23/2002 12 12/16/2002 12/16/2002 13 1/3/2003 1/3/2003 14 1/7/2003 1/7/2003 45 42/31/2002 4/17/2003 16 3/11/2003 3/18/2003 17 3/18/2003 3/18/2003 18 4/15/2003 4/15/2003 19 6/4/2003 6/18/2003 20 8/19/2003 9/4/2003 21 10/3/2003 10/23/2003 22 11/18/2003 11/18/2003	Complete Withdrawn 9/14/06 Active Active Active	CC	NC	590 850		Contra Costa	CA CA	PGE	Contra Costa Power Plant 230 kV bus	11/28/2007 1/1/2004	11/1/2009	N/A NA	Complete	Complete	Complete	GSFA Executed
5 8/9/2000 8/9/2000 6 8/23/2000 8/23/2000 7 8/16/2000 10/6/2000 8 11/28/2000 10/6/2000 9 12/1/2000 12/1/2000 10 5/2/2001 5/2/2001 11 10/14/2002 10/23/2002 12 12/16/2002 12/16/2002 13 1/3/2003 1/3/2003 14 1/7/2003 1/7/2003 15 12/31/2002 1/17/2003 16 3/11/2003 3/11/2003 17 3/18/2003 3/18/2003 18 4/15/2003 4/15/2003 19 6/4/2003 6/18/2003 20 8/19/2003 9/4/2003 21 10/3/2003 10/23/2003 22 11/18/2003 11/18/2003	Withdrawn 9/14/06 Active Active Active		NG NG	521	545	Riverside San Diego	CA	SCE SDGE	Devers Substation 230 kV Bus Palomar 230 kV	6/1/2001	5/1/2008 10/15/2005	NA NA	Complete Complete	Re-study Complete Complete	Complete	In Progress Executed
7 8/16/2000 10/6/2000 8 11/28/2000 11/28/2000 9 12/1/2000 12/1/2000 10 5/2/2001 5/2/2001 11 10/14/2002 10/23/2002 12 12/16/2002 12/16/2002 13 1/3/2003 1/3/2003 14 17/2003 1/3/2003 16 3/11/2003 1/17/2003 16 3/11/2003 3/18/2003 17 3/18/2003 3/18/2003 18 4/15/2003 4/15/2003 19 6/4/2003 6/18/2003 20 8/19/2003 9/4/2003 21 10/3/2003 10/23/2003 22 11/18/2003 11/18/2003	Active Active	~~	NG	900	040	San Diego	CA	SDGE	Encina Power Plant Switchyard	6/30/2003	6/1/2008	NA	Complete	In Progress		Excourse
8 11/28/2000 11/28/2000 9 12/1/2000 12/1/2000 10 5/2/2001 5/2/2001 11 10/14/2002 10/23/2002 12 12/16/2002 12/16/2002 13 1/3/2003 1/3/2003 14 17/2003 1/7/2003 16 3/11/2003 3/11/2003 17 3/18/2003 3/18/2003 18 4/15/2003 4/15/2003 19 6/4/2003 6/18/2003 20 8/19/2003 9/4/2003 21 10/3/2003 10/23/2003 22 11/18/2003 11/18/2003	Active	CC	NG	1156		San Joaquin	CA	PGE	Tesla Substation 230 kV Bus E	6/1/2008	12/31/2010	NA	Re-Study In Progress	Complete		GSFA Executed
9 12/1/2000 12/1/2000 10 5/2/2001 5/2/2001 11 10/14/2002 10/23/2002 12 12/16/2002 12/16/2002 13 1/3/2003 1/3/2003 14 17/2003 1/7/2003 16 3/11/2003 3/11/2003 17 3/18/2003 3/18/2003 17 3/18/2003 3/18/2003 18 4/15/2003 4/15/2003 19 6/4/2003 6/18/2003 20 8/19/2003 9/4/2003 21 10/3/2003 11/18/2003 22 11/18/2003 11/18/2003		CC	NG	630		Los Angeles	CA	SCE	El Segundo 220 kV Bus	8/1/2009	6/1/2011	NA	Complete	Complete	Complete	Executed
40 5/2/2001 5/2/2001 11 10/14/2002 10/23/2002 12 12/16/2002 12/16/2002 13 1/3/2003 1/3/2003 14 1/7/2003 1/7/2003 45 12/31/2002 1/17/2003 16 3/11/2003 3/11/2003 17 3/18/2003 3/18/2003 18 4/15/2003 4/15/2003 19 6/4/2003 6/18/2003 20 8/19/2003 9/4/2003 21 10/3/2003 10/23/2003 22 11/18/2003 11/18/2003		CC	NG	750		San Diego	CA	SDGE PGE	Sycamore Canyon Substation	6/1/2004 1/1/2008	12/31/2010	NA NA	Complete	Re-Study in Progress		In Progress
11 10/14/2002 10/23/2002 12 12/16/2002 12/16/2002 13 1/3/2003 1/3/2003 14 1/7/2003 1/7/2003 15 1/2/31/2002 1/47/2003 16 3/11/2003 3/11/2003 17 3/18/2003 3/18/2003 18 4/15/2003 4/15/2003 19 6/4/2003 6/18/2003 20 8/19/2003 9/4/2003 21 10/3/2003 10/23/2003 22 11/18/2003 11/18/2003	Withdrawn 5/24/07	CC	NG NG	1200 620		San Luis Obispo Kings	CA CA	PGE	Morro Bay Substation Gates Substation (Arco Gates 230 kV line)	1/1/2008 1/1/2009	1/1/2008 7/1/2009	NA NA	Complete Complete	Complete Complete		GSFA Executed GSFA Executed
12 12/16/2002 12/16/2002 13 1/3/2003 1/3/2003 14 17/2003 17/2003 15 12/31/2002 1/17/2003 16 3/11/2003 3/11/2003 17 3/18/2003 3/18/2003 17 3/18/2003 3/18/2003 18 4/15/2003 4/15/2003 19 6/4/2003 6/18/2003 20 8/19/2003 9/4/2003 21 10/3/2003 10/23/2003 22 11/18/2003 11/18/2003	Active	WT	W	63		San Bernardino	CA	SCE	Mountain Pass Substation	12/1/2004	3/1/2008	NA	Complete	Complete		IFA Executed
14 1/7/2003 1/7/2003 15 12/31/2002 1/17/2003 16 3/11/2003 3/11/2003 17 3/18/2003 3/18/2003 18 4/15/2003 4/15/2003 19 6/4/2003 6/18/2003 20 8/19/2003 9/4/2003 21 10/3/2003 10/23/2003 22 11/18/2003 11/18/2003	Complete	WT	W	150		Solano	CA	PGE	New Birds Lndng Sw Stn near Contra Costa PP Sub	10/31/2005	3/30/2006	NA	Complete	Complete		GSFA Executed
15 12/31/2002 1/17/2003 16 3/11/2003 3/11/2003 17 3/18/2003 3/18/2003 18 4/15/2003 4/15/2003 19 6/4/2003 6/18/2003 20 8/19/2003 9/4/2003 21 10/3/2003 10/23/2003 22 11/18/2003 11/18/2003	Active	Н	WTR	40		San Diego	CA	SDGE	Escondido	7/1/2007		NA	Complete	Complete		IFA Executed, IA Tendered
16 3/11/2003 3/11/2003 17 3/18/2003 3/18/2003 18 4/15/2003 4/15/2003 19 6/4/2003 6/18/2003 20 8/19/2003 9/4/2003 21 10/3/2003 10/23/2003 22 11/18/2003 11/18/2003	Active Withdrawn 7/13/07	CC	NG ₩	65		San Diego	CA	SDGE	Miguel-Tijuana * (65 MWs -additional capacity, 615 total MW)	12/31/2004	1/1/2008	NA	Complete	Complete		IA Tendered
17 3/18/2003 3/18/2003 18 4/15/2003 4/15/2003 19 6/4/2003 6/18/2003 20 8/19/2003 9/4/2003 21 10/3/2003 10/23/2003 22 11/18/2003 11/18/2003	Active	WT WT	W	50 120		Santa Barbara	CA CA	SCE PGE	Cabrillo	9/1/2004 6/1/2006	1/1/2010 10/1/2008	NA NA	Complete Complete	Complete Complete		GSFA Executed
19 6/4/2003 6/18/2003 20 8/19/2003 9/4/2003 21 10/3/2003 10/23/2003 22 11/18/2003 11/18/2003	Active	CC	NG	520		Riverside	CA	SCE	Devers-Palo Verde 500 kV line near Blythe	1/1/2006	6/1/2008	NA NA	Complete	Complete		COLVERGORICA
20 8/19/2003 9/4/2003 21 10/3/2003 10/23/2003 22 11/18/2003 11/18/2003	Withdrawn 6/20/06	WT	₩	200		Los Angeles	CA	SCE	Antelope	12/31/2005	12/12/2007	NA	Complete	Complete		Tendered
21 10/3/2003 10/23/2003 22 11/18/2003 11/18/2003	Complete	WT	W	46		San Diego	CA	SDGE	Crestwood	12/31/2005	10/1/2005	NA	Complete	Complete		Executed
22 11/18/2003 11/18/2003	Active	WT	W	300		Kern	CA	SCE	Antelope	12/31/2006	12/31/2008	NA NA	Re-Study In Progress	Complete		Fuseuted
	Complete Active	WT WT	W	37.55 38		Byron Solano	CA CA	PGE PGE	Windmaster/Buena Vista Sub New Birds Lndng Sw Sta near Contra Costa PP Sub	7/1/2004 6/30/2005	12/29/2006 12/31/2011	NA NA	NA Complete	NA Complete		Executed GSFA Executed
23 11/17/2003 11/24/2003	Complete	CC	NG	72		San Bernardino	CA	SCE	San Bernadino 220+M127 kV	11/1/2004	10/1/2005	NA NA	Complete	Complete		IFA Executed
24 1/30/2004 1/30/2004	Active	WT	W	150		Solano	CA	PGE	High Winds/Contra Costa PP	12/31/2006	11/28/2008	NA	Complete	Complete		GSFA Executed
25 <u>2/5/2004</u> <u>2/5/2004</u>	Withdrawn 6/11/07	WT	₩	117		San Diego	CA	SDGE	Crestwood	6/6/2005	6/1/2007	NA	In Progess			
26 2/12/2004 2/12/2004	Withdrawn 8/23/07	WT	₩	36		San Diego	CA	SDGE	Crestwood	4/1/2006	1/1/2008	NA	In Progress	0 11		
27 2/23/2004 2/23/2004 28 2/25/2004 2/25/2004	Withdrawn 10/19/07 Active	CT	NG NG	650 145.1		San Diego San Francisco	CA CA	SDGE PGE	230/138/69 kV South Bay (650 MW CC) Potrero 115 kV Sub	1/1/2010 12/1/2006	1/1/2010 6/1/2008	NA NA	Complete Complete	Complete Complete		In Progress Executed
29 3/8/2004 3/29/2004	Active	WT	W	201		Lake & Sonoma	CA	PGE	Collector Substation at Geysers #17 & Fulton 230 kV line	12/1/2006	7/1/2009	NA NA	Complete	Re-study in Progress		In Progress
30 4/26/2004 4/26/2004	Active	CT	NG	48.7		San Francisco	CA	PGE	SF Airport Substation	6/1/2006	6/1/2008	NA	Complete	Complete		3
31 4/12/2004 5/11/2004	Active	WT	W	201		Kern	CA	SCE	Monolith Substation	12/31/2007	12/31/2009	NA	In Progress			
32 5/12/2004 5/24/2004	Active	WT	W	201		San Diego	CA	SDGE	Boulevard - Crestwood 69-kV transmission line	9/1/2007	12/1/2008	NA NA	In Progess	0		0054 5
33 7/9/2004 7/12/2004 34 7/19/2004 7/19/2004	Complete Active	ST WT	G W	10 300		Churchill Kern	CA	SCE SCE	Bishop Control Sub Monolith Substation	7/14/1988 7/1/2007	5/31/2006 12/31/2009	NA NA	Complete In Progress	Complete		GSFA Executed
35 10/25/2004 10/25/2004 35 10/25/2004	Withdrawn 4/12/07	CT	NG	4 9.9		Fresno	CA	PGE	115 KV Panoche Sub	5/31/2006	5/31/2006	NA NA	Complete	Complete		Tendered
36 11/1/2004 11/1/2004	Withdrawn 2/8/07	CT	NG	99.9		Stanislaus	CA	PGE	115 kV Tesla Stockton Cogen Trans. Line.	5/31/2006	5/31/2006	NA	Complete	Complete		Tendered
37 11/8/2004 11/8/2004	Active	СТ	NG	74.9		San Joaquin	CA	PGE	Tesla Substation	1/1/2007	1/1/2010	NA	Complete	Complete		In Progress
38 10/19/2004 11/11/2004	Active	IC VA/T	NG	146.4		Humboldt	CA	PGE	Humboldt Power Plant Substation	8/1/2008	6/30/2009	NA NA	Complete	Complete		In Progress
39 11/11/2004 11/11/2004 40 10/19/2004 11/11/2004	Active Active	WT IC	W NG	200 118		Solano Alameda	CA CA	PGE PGE	New Birds Lndng Sw Sta near Contra Costa PP Sub Eastshore Substation	12/31/2008 5/1/2007	12/22/2009 3/2/2009	NA NA	Complete Complete	Complete Complete		Executed Executed
41 11/9/2004 11/18/2004	Active	CT	NG	157		Kern	CA	SCE	Pastoria Substation	7/31/2006	7/31/2009	NA NA	Complete	In Progress		Executed
42 11/24/2004 11/26/2004	Active	CT	NG	300		Fresno	CA	PGE	McCall Substation	5/31/2007	3/31/2013	NA NA	Complete	Complete		Executed
43 11/29/2004 11/29/2004	Withdrawn 6/27/06	IC	NG	168.7		San Joaquin	CA	PGE	Tesla-Bellota 230 kV line	1/1/2008	10/1/2007	NA	Complete	<u> </u>		Tendered
44 <u>11/29/2004</u> <u>11/29/2004</u>	Withdrawn 3/30/06	IC	NG	126.5		Madera	CA	PGE	Borden Substation 230 kV Bus	1/1/2008	10/1/2007	NA	Complete	Complete		
45 12/1/2004 12/1/2004 46 12/1/2004 12/1/2004	Active	CT CT	NG NG	361 531		Alameda Contra Costa	CA CA	PGE PGE	Eastshore substation Tesla-Tracy #1 230 kV Line - Tracy Sub	7/31/2006	6/1/2010	NA NA	Complete	Re-study Complete		Executed
46 12/1/2004 12/1/2004 47 12/1/2004 12/1/2004	Withdrawn 5/11/07 Active	CT	NG NG	200.6		Fresno	CA	PGE	Herndon - Kearney 230 kV line - Tracy Sub	7/31/2006 6/30/2008	7/31/2008 6/30/2008	NA NA	Complete Complete	Complete Complete		In Progress
48 12/1/2004 12/1/2004 18/1/2004	Withdrawn 4/6/06	5	NG	590 590		Contra Costa	CA	PGE	Contra Costa Power Plant 230 kV Substation	1/1/2008	10/1/2008	NA NA	Complete	Complete		Tendered
49 12/14/2004 12/14/2004	Active	WT	W	100.5		Riverside	CA	SCE	Devers Substation	12/1/2006	1/1/2008	NA	Re-Study In Progress	On Hold		
50 12/21/2004 12/21/2004	Active	CC	NG	810		Riverside	CA	SCE	SCE Valley Substation	5/31/2008	5/31/2008	NA	Complete			
51 12/20/2004 12/21/2004	Complete	IC	NG	0.55		Fresno	CA	PGE	70 kV Kerman-Helm transmission line	4/30/2005	5/31/2006	NA NA	NA Re-Study Complete	NA Description		GSFA Executed
52 12/1/2004 12/21/2004 53 12/1/2004 12/22/2004	Active	CT	NG	401		Fresno	CA	PGE	Panoche Sub Station	6/30/2008	8/1/2009	NA I				Executed
54 11/11/2004 1/12/2005	Withdraws 7/24/06	CT	NC				C ^	DCL	Pleasant Crove Sub Station				, ,	, ,		
55 12/1/2004 1/13/2005	Withdrawn 7/24/06 Active	CT CT	NG NG	116.8 119.9		Placer Fresno	CA CA	PGE PGE	Pleasant Grove Sub Station Panoche Substation	6/1/2008 6/1/2008	6/1/2008 1/1/2009	NA NA	Complete Complete	Complete Re-study Complete		Tendered Tendered

Notes:

This Queue posting reflects the requirements of the FERC Order 2003 for Large Generator Interconnection Procedures (LGIP). Generator Interconnection Requests or applications Completed or Withdrawn prior to this posting are not shown. Future withdrawals will be indicated in the Application Status as Withdrawn and their Queue position will be retired. Weekly posting is anticipated.

- Generator Type Key: IC=Internal Combustion, ST=Steam Turbine, CT=Combustion Turbine, CC=Combined Cycle, H=Hydro, WT=Wind Turbine, PV=Photovoltaic, RE=Reciprocating Engine
- Fuel Type Key: W=Wind, NU=Nuclear, NG=Natural Gas, O=Oil, C=Coal, B=Biomass, S=Solar, LFG=Land Fill Gas, WTR=Water, G=Geothermal, HR=Heat Recovery

	Generating Facility						m MWs	Location			Point of Interconnection			Study Availability					
Queue Position	Interconnection Request Receive Date	Queue Date	Application Status	Туре	Fuel	Summer	Winter	County	State	Utility	Station or Transmission Line	Proposed On-line Date (as filed with IR)	Current On-line Date	Feasibility Study (IFS)	System Impact Study (SIS)	Facility Study (FAS)	Optional Study (OS)	Interconnection Agreement Status	
56	12/21/2004	1/25/2005	Withdrawn 5/31/07	CC	NG	634		Clark	₩V	SCE	El Dorado 230 kV Substation	6/1/2007	8/1/2009	NA	Complete	Complete			
57 58	12/1/2004 1/25/2005	2/8/2005 2/22/2005	Active Active	CC ST	NG G	715 62		Colusa Mineral	CA NV	PGE SCE	Between Cottonwood and Vaca-Dixon Control 115kV Substation	1/1/2010 10/7/2007	5/1/2010 2/1/2012	NA NA	Complete Complete	Complete Complete	TAS II In Progress	Executed Filed Unexecuted	
59	3/25/2005	3/28/2005	Withdrawn 8/2/06	CT	NG NG	97.2		Kings	CA	PGE	Henrietta Substantion 70 kV	1/1/2008	1/1/2008	NA NA	Complete	Complete	TAS II III Flogress	Tendered	
60	3/28/2005	3/28/2005	Active	CT	NG	94		Kern	CA	PGE	Kern Oil Substation 115 kV	3/31/2007	3/31/2013	NA	Complete	Complete		Executed	
61	3/28/2005	3/30/2005	Complete	ST	NG	73.27		Fresno	CA	PGE	70kV Helm-Kerman	5/31/2006	5/31/2006	NA	Complete	Complete		Executed	
62 63	3/28/2005 3/25/2005	4/13/2005 4/18/2005	Withdrawn 2/21/06 Withdrawn 1/4/07	ee ee	NG NG	166.5 158		Humboldt Contra Costa	CA	PGE PGE	Humboldt Bay Humboldt #1 115 kV Contra Costa (230 kV)	5/31/2007 1/1/2008	6/1/2007 1/1/2008	NA NA	Complete	Tendered Re-study in Progress		Tendered	
53	3/30/2005	4/28/2005	Withdrawn 1/13/06	CI	NG NG	130 147		Humboldt	CA	PGE	Humboldt Bay Power Plant Sub	5/1/2008	3/1/2008	NA NA	Complete	Re-study in Progress		i chacica	
65	5/6/2005	5/6/2005	Withdrawn 4/11/07	CT	NG	424.8		Los Angeles	CA	SCE	Long Beach Gen Station 220kv switchyard	1/1/2007	6/1/2010	NA	Complete	Complete			
66	5/6/2005	5/6/2005	Active	CT	NG	500.5		Los Angeles	CA	SCE	Walnut Substation	9/1/2007	6/1/2008	NA	Re-Study In Progress	Complete		Executed	
67 68	3/28/2005	5/9/2005	Active	CC Other	NG	245 850		Alameda	CA CA	PGE	Eastshore Substation	7/31/2008	7/31/2008	NA Wainad	Complete	Re-study Complete	In December		
68 69	3/30/2005 5/6/2005	5/11/2005 6/7/2005	Active Withdrawn 5/17/06	CT	S NG	850 527		San Bernadino San Bernardino	CA	SCE SCE	Pisgah 230 kV Substation Etiwanda 230kV Substation	12/31/2009 8/1/2008	12/31/2009 8/1/2008	Waived NA	Re-Study In Progress Complete	In Progress	In Progress	1	
70	5/9/2005	6/14/2005	Active	IC	LFG	10.7		San Mateo	CA	PGE	Hillsdale Junction-Half Moon Bay 60 kV line	12/23/2005	9/4/2008	NA	Complete	Complete		GSFA Executed	
71	5/6/2005	6/15/2005	Withdrawn 1/11/06	CC	NG	591		Clark	N∀	SCE	Eldorado 500/230kV Substation	2/28/2007	1/31/2007	Complete	Tendered	,			
72	4/26/2005	6/21/2005	Active	H	WTR	500		Riverside	CA	SCE/SDGE	Proposed Lee Lake Substation	12/31/2008	12/31/2008	NA NA	Complete	Complete		In Progress	
73 74	6/6/2005 7/12/2005	6/27/2005 7/12/2005	Active Active	WT WT	W	250 102		Kern Shasta	CA CA	SCE PGE	Antelope Sub 230kV line btn Pit#3 & Round Mtn	12/31/2007 12/15/2007	12/31/2008 9/30/2009	NA Complete	Complete Complete	In Progress Re-study Complete		Executed	
75	4/28/2005	7/15/2005	Active	ST	В	10.5		Madera	CA	PGE	Le Grand-Chowcilla 115 kV	12/31/2005	1/31/2008	NA	Complete	Complete		GSFA Executed	
76	4/28/2005	7/15/2005	Active	ST	В	10.5		Merced	CA	PGE	PG&E Merced #1 70 kV circuit	7/1/2006	2/29/2008	NA	Complete	Complete		GSFA Executed	
77	8/19/2005	8/22/2005	Withdrawn 6/26/06	WT	₩	300		Kern	CA	SCE/PG&E	TBD Bakersfiled	11/30/2007	11/30/2007	Complete	Tendered	0 11			
78 79	8/31/2005 5/24/2005	8/31/2005 9/7/2005	Active Active	Other WT	S W	300 51		Imperial Kern	CA CA	SDGE SCE	Imperial Valley Substation Proposed "New" Dutchwind Substation	12/31/2009 6/1/2006	12/31/2009 5/31/2009	Waived Complete	Complete Complete	Complete Tendered		In Progress	
80	9/12/2005	9/12/2005	Active	CC	NG	610		Los Angeles	CA	SCE	Laguna Bell Substation 230 kV	7/31/2008	3/31/2009	Waived	Complete	Re-study In Progress			
81	9/13/2005	9/13/2005	Complete	ST	G	55		Lake	CA	PGE	Geysers #17 - Fulton 230 kV Line	9/1/2006	11/1/2007	Waived	Complete	Complete		Executed	
82	6/10/2005	9/14/2005	Withdrawn	ST	₿	6.8		Humboldt	CA	PGE	Rio Dell Substation 60 KV	1/1/2006	1/1/2006	Waived	Complete	Waived			
83 84	9/16/2005 11/22/2005	9/16/2005 12/1/2005	Active Active	WT WT	W	60 400		San Bernardino Kern	CA CA	SCE SCE	Lugo-Pisgah No. 2 230 kV tran line Cottownwind Substation	12/31/2008 12/31/2009	12/31/2008 12/31/2009	Complete NA	In Progress Complete	In Progress			
85	12/28/2005	12/28/2005	Active	WT	W	120		Kern	CA	SCE	Segment 3 230 Collector Loop Tehachapi	12/31/2009	12/31/2009	NA NA	Complete	III Flogress			
86	12/30/2005	12/30/2005	Withdrawn 4/7/06	CT	NG	49.9		Kern	CA	PGE	Kern Oil-Vedder 115 kV Line	3/1/2008	3/1/2008		,				
86A	1/20/2006	1/20/2006	Active	WT	W	33.1		Kern	CA	SCE	Vincent Substation	1/1/2008	10/1/2009	NA	Complete	In Progress			
86B 87	1/20/2006 2/3/2006	1/20/2006 2/3/2006	Active Withdrawn 3/9/06	WT ST	W NU	34 28		Kern San Luis Obispo	CA CA	SCE PGE	Canwind Substation Diable Canvon Substation Circuit Breakers 532 and 632	1/1/2008 12/8/2005	10/1/2009 12/8/2005	NA	Complete	In Progress			
88	2/10/2006	2/10/2006	Active	CC	NG	613.5		Los Angeles	CA	SCE	Hinson Substation 230 kV bus	7/1/2011	7/1/2011	Complete	Re-Study In Progress				
89	2/13/2006	2/13/2006	Active	CC	NG	570		San Bernardino	CA	SCE	Caldwell-Victor line	7/1/2009	4/1/2010	Waived	Complete	In Progress			
90	2/16/2006	2/16/2006	Active	CT	NG	93		San Diego	CA	SDGE	Existing radial 69kV gen-tie line to TL6929	6/1/2007	1/1/2008	Complete	Complete	In Progress			
91 92	2/22/2006 2/24/2006	2/22/2006 2/24/2006	Active Active	WT CC	W NG	51 570		Kern Los Angeles	CA CA	SCE SCE	Segment 3 of Antelope Transmission Project Vincent 230 kV	3/31/2010 7/1/2009	3/31/2010 8/1/2010	NA NA	Complete Complete				
93	3/1/2006	3/1/2006	Active	WT	W	220		Kern	CA	SCE	Tehachapi Conceptual Substation #1	12/31/2008	12/31/2008	NA NA	Complete	In Progress			
94	3/1/2006	3/1/2006	Active	WT	W	180		Kern	CA	SCE	Tehachapi Conceptual Substation #2	12/31/2008	12/31/2008	NA	Complete	In Progress			
95	3/1/2006	3/1/2006	Active	WT	W	550		Kern	CA	SCE	Tehachapi Conceptual Substation #1	12/31/2009	12/31/2009	NA	Complete	In Progress			
96	3/1/2006 3/1/2006	3/1/2006 3/1/2006	Active	WT WT	W	600		Kern	CA CA	SCE SCE	Tehachapi Conceptual Substation #1	12/31/2009 12/31/2009	12/31/2009 12/31/2009	NA NA	Complete	In Progress			
97 98	3/9/2006	3/9/2006	Active Complete	ST	NU	160 37		Kern San Luis Obispo	CA	PGE	Tehachapi Conceptual Substation #5 Diablo Canyon Substation Circuit Breakers 532 and 632	12/8/2005	1/1/2006	NA NA	Complete Complete	In Progress NA		NA	
99	3/29/2006	3/29/2006	Complete	ST	NU	45		San Luis Obispo	CA	PGE	Diablo Canyon Substation Circuit Breakers 542 and 642	6/8/2006	6/8/2006	NA	Complete	NA		NA	
100	4/5/2006	4/5/2006	Active	WT	W	120		Kern	CA	SCE	Vincent Substation through Sagebrush 230 kV line	12/31/2007	12/31/2009	NA	In Progress				
101 102	4/7/2006 4/19/2006	4/7/2006 4/19/2006	Withdrawn 10/17/06 Withdrawn 1/17/08	CT WT	NG ₩	100 210		Kern Monterev	CA CA	PGE PGE	PG&E Kern Oil-Vedder 115 kV line PG&E Coburn 230 kV Sub	3/1/2008 11/30/2008	3/1/2008 11/30/2008	Complete Complete	Tendered Complete	Complete		In Progress	
102A	4/19/2006 4 /21/2006	4/19/2006 4 /21/2006	Withdrawn 6/26/06	WT	₩	100		Santa Barbara	CA	PGE	PG&E #2 Cabrillo Divide 115 kV line	11/30/2008 12/31/2009	11/30/2008 12/31/2009	Tendered	оотрісіс	оотрісте		III FIUGIUSS	
103	5/2/2006	5/2/2006	Active	ST	В	27		San Diego	CA	SDGE	Border Substation 69 kV	12/1/2008	12/1/2008	Complete	Complete	In Progress			
104	4/14/2006	5/3/2006	Active	СТ	NG	304		Los Angeles	CA	SCE	Laguna Bell 230 kV Substation	7/31/2009	7/31/2009	Waived	Complete	In Progress			
105	5/4/2006	5/4/2006	Withdrawn 6/29/06	Other	₩	100		Humboldt Con Dornardina	CA	PGE	Between Rio Del Junction and Bridgeville	10/30/2009	10/30/2009	Complete				<u> </u>	
106 106A	5/26/2006 5/1/2006	5/26/2006 6/6/2006	Active Active	Other WT	S W	635 160		San Bernardino San Diego	CA CA	SCE SDGE	Mohave 500 kV Switchyard 500 kV Imperial Valley-Miquel trans line	12/31/2009 6/30/2008	12/31/2010 6/30/2008	Complete Complete	Complete	In Progress			
1007	6/9/2006	6/9/2006	Withdrawn 11/17/06	WT	₩	128		Solano	CA	PGE	Brighton-Contra Costa 115 kV	3/1/2011	3/1/2011	Complete	CCpioto	13g1000			
108	6/9/2006	6/9/2006	Active	WT	W	128		Solano	CA	PGE	Lambie-Contra Costa 230 kV	3/1/2011	3/1/2011	Complete	Complete	Tendered	Complete		
108A	6/14/2006	6/14/2006 6/16/2006	Withdrawn 11/16/06	Other	\$	300		San Luis Obispo	CA	PGE	Morro Bay Midway 230 kV circuit	3/1/2010	3/1/2010	Tendered In Progress					
109 110	6/14/2006 6/14/2006	6/16/2006 6/16/2006	Active Active	Other Other	S	550 1400		San Bernardino San Bernardino	CA CA	SCE SCE	Pisgah Substation Pisgah Substation	3/1/2011 3/1/2013	3/1/2011 3/1/2013	In Progress In Progress					
111	6/23/2006	6/26/2006	Active	ST	В	20		Kern	CA	PGE	Tap of Chevron 70kv tran line	8/31/2009	8/31/2009	NA NA	Complete	Complete		GSFA Executed	
112	6/28/2006	6/28/2006	Active	WT	W	300		San Diego	CA	SDGE	500 kV Imperial Valley-Miguel trans line	10/31/2008	10/31/2008	Complete	Complete	In Progress			
113	6/29/2006	6/30/2006	Active	WT	W	30		Solano San Barnardina	CA	PGE	Birds Landing	4/1/2009	4/1/2009	Complete	Complete	Waived		In Progress	
114 115	6/29/2006 6/29/2006	7/12/2006 7/12/2006	Active Active	WT WT	W	150 150		San Bernardino San Bernardino	CA CA	SCE SCE	Victor 230 kV Pisgah-Lugo 230kV Trans Line	7/1/2008 7/1/2008	7/1/2008 7/1/2008	Complete Complete				1	
116	6/29/2006	7/12/2006	Active	WT	W	50		San Bernardino	CA	SCE	Pisgah-Lugo Sub 230kV	7/1/2008	7/1/2008	Complete					
117	7/7/2006	7/20/2006	Withdrawn 5/9/07	WT	₩	70		Humboldt	CA	PGE	Bridgeville 115kV Substation	10/30/2009	10/30/2009	Complete	In Progress				

Notes:

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					rating	Maximu	ım MWs	Location	١		Point of Interconnection			Study Availability				
Queue Position	Interconnection Request Receive Date	Queue Date	Application Status	Туре	Fuel	Summer	Winter	County	State	Utility	Station or Transmission Line	Proposed On-line Date (as filed with IR)	Current On-line Date	Feasibility Study (IFS)	System Impact Study (SIS)	Facility Study (FAS)	Optional Study (OS)	Interconnection Agreement Status
118	8/2/2006	8/4/2006	Withdrawn 11/28/07	CC	NG	550		Mohave	AZ	SCE	SCE Mojave Substation	1/8/2009	1/8/2009	Re-study Complete	Tendered			
119	8/8/2006	8/8/2006	Active	WT Other	W	500		Kern San Bernardino	CA	SCE	Tehachapi Conceptual Substation #1	12/31/2010	12/31/2010	In Progress				
120 121	8/9/2006 8/16/2006	8/9/2006 8/17/2006	Active Active	CT	S NG	1200 49		San Bernardino San Diego	CA CA	SCE SDGE	Mojave 500 kV Switchyard SDG&E Miramar GT Substation	3/1/2011 3/31/2009	3/1/2011 6/30/2008	In Progress Waived	Complete	Complete		
122	8/16/2006	8/17/2006	Withdrawn 1/16/07	CT	NG	99		Orange Orange	CA	SDGE	SDG&E Margarita Substation	3/31/2009	6/30/2008	Waived	In Progress	Complete		
123	8/16/2006	8/17/2006	Withdrawn 1/16/07	CT	NG	99		San Diego	CA	SDGE	SDG&E Pala Substation	3/31/2009	6/30/2008	Waived	In Progress			
124	8/22/2006	8/22/2006	Active	Other	S	600		Imperial	CA	SDGE	Imperial Valley Substation	3/1/2011	3/1/2011	Waived	Complete	Tendered		
125 126	8/22/2006 8/31/2006	8/22/2006 8/31/2006	Active Active	Other WT	S W	250 1500		San Bernardino Clark	CA NV	SCE SCE	Kramer-Coolwater 220kV Line #1 Eldorado Substation	8/1/2010 12/31/2011	8/1/2010 12/31/2011	Complete Complete	In Progress In Progress			
127	8/22/2006	9/1/2006	Withdrawn 7/11/07	Other	HR	27.2		Contra Costa	CA	PG&E	115kV Oleum Switchyard	8/1/2008	8/1/2008	Waived	Complete	Tendered		
128	9/1/2006	9/1/2006	Active	CT	NG	565	600	Fresno	CA	PGE	McCall Substation	12/1/2010	12/1/2010	Complete	Complete	In Progress		
129	9/13/2006	9/13/2006	Withdrawn 10/24/06	WT	₩	400		San Bernardino	CA	SCE	Pisgah 230kV Substation	3/1/2010	3/1/2010					
130 131	9/13/2006	9/13/2006	Active Active	Other ST	S	565 100		San Bernardino	CA CA	SCE SCE	Mohave Generating Station	12/31/2010	12/31/2010	In Progress	In Progress			
132	9/25/2006 9/27/2006	9/25/2006 9/27/2006	Active	WT	S W	297		San Bernardino Kern	CA	SCE	Loop new sub connecting to Eldorado-Mtn Pass 115kV line SCE 230kV Conceptual Substation #2	6/30/2010 12/31/2009	6/30/2010 12/31/2009	Complete In Progress	In Progress			
133	10/3/2006	10/3/2006	Withdrawn 12/21/06	WT	₩	140		San Bernardino	CA	SCE	Pisgah Lugo 230kV	3/1/2010	3/1/2010	Tendered				
134	10/9/2006	10/9/2006	Withdrawn 1/31/07	CT	NG	200		Kern	CA	SCE	Pastoria Substation	5/31/2010	5/31/2010					
135	10/10/2006	10/10/2006	Active	WT	W	60		San Bernardino	CA	SCE	Lugo-Pisgah 230kV Transmission Line	9/15/2008	9/15/2008	Complete	In Progress			
136 137	10/16/2006 10/17/2006	10/16/2006 10/17/2006	Active Active	CT CT	NG NG	300 300		San Bernardino San Diego	CA CA	SCE SDGE	Etiwanda 230kV Substation Encina Plant 230kV bus	1/1/2010 8/1/2008	1/1/2010 8/1/2008	Waived Waived	Complete Complete	In Progress In Progress		
138	10/17/2006	10/23/2006	Active	WT	W	150		Riverside	CA	SCE	Devers-Vista 230kV #1	12/31/2008	12/31/2008	Waived	Complete	iii i iogiess		
139	10/24/2006	10/24/2006	Active	CC	NG	698		San Bernardino	CA	SCE	SCE Rancho Vista 500kV Sub	6/1/2010	6/1/2010	Waived	Complete	In Progress		
140	10/31/2006	10/31/2006	Withdrawn 2/26/07	ST	G	75		Inyo	CA	SCE	Coso-Kramer 230 kV	8/18/2011	8/18/2011	Tendered				
141 142	11/3/2006	11/3/2006	Withdrawn 8/24/07 Active	CT ST	NG S	504 80		San Bernardino San Bernardino	CA CA	SCE SCE	SCE Rancho Vista 500kV Sub	6/1/2010	6/1/2010	Waived	Complete	Tendered		
142	11/6/2006 11/6/2006	11/6/2006 11/6/2006	Active	ST	S	80		San Bernardino San Bernardino	CA	SCE	Kramer Substation Kramer Substation	12/31/2009 12/31/2009	12/31/2009 12/31/2009	Complete Complete	Tendered			
144	11/6/2006	11/6/2006	Active	ST	S	320		San Bernardino	CA	SCE	Kramer Substation	12/31/2009	12/31/2009	In Progress				
145	11/8/2006	11/8/2006	Active	CC	HR	591		Clark	NV	SCE	Eldorado 500 kV Substation	6/1/2010	6/1/2010	Complete	In Progress			
146 147	11/16/2006	11/16/2006	Active	PV	S	150		Riverside	CA	SCE	Eagle Mountain Substation	12/1/2008	12/1/2008	Complete	In Progress			
147	11/16/2006 11/16/2006	11/16/2006 11/16/2006	Active Withdrawn 2/1/07	PV ST	S G	400 90		Riverside Churchill	CA NV	SCE SCE	Eagle Mountain Substation Oxbow 230kV Substation	2/1/2010 10/1/2011	2/1/2010 10/1/2011	Complete	In Progress			
149	11/16/2006	11/16/2006	Active	WT	W	362		Kern	CA	SCE	SCE Highwind Sub #2 (proposed) 230 kV	12/31/2009	12/31/2009	In Progress				
150	11/16/2006	11/16/2006	Active	CT	NG	43		San Diego	CA	SDGE	Border Substation	5/31/2008	5/31/2008	Complete	Complete	Tendered		
151	11/17/2006	11/17/2006	Withdrawn 12/11/06	CT	NG	510		San Bernardino	CA	SCE	Chino Substation 230kV Line	5/1/2011	5/1/2011					
152 153	11/22/2006 11/22/2006	11/22/2006 11/22/2006	Active Active	WT WT	W	105 100		Santa Barbara Kern	CA CA	PGE SCE	No. 1 & No. 2 Mesa-Divide 115kV Lines 66kV Antelope-Neenach-Bailey line	12/31/2009 5/30/2008	12/31/2009 5/30/2008	Complete In Progress	In Progress			
154	11/28/2006	11/30/2006	Active	ST	S	500		Kern	CA	SCE	Kramer 230 kV Substion	12/31/2009	12/31/2012	Complete				
155	12/1/2006	12/1/2006	Active	CT	NG	300		Alameda	CA	PGE	Oakland C 115kV substation	5/31/2010	5/31/2010	Complete	In Progress			
156	12/5/2006	12/5/2006	Active	WT	W	201		San Bernardino	CA	SCE	Lugo-Pisgah 230 kV circuit #1	3/1/2009	3/1/2009	In Progress				
157 158	12/15/2006 12/15/2006	12/15/2006	Active	WT WT	W	100 100		Kern Kern	CA CA	SCE SCE	66kV Rosamond-Antelope line	5/30/2008 5/30/2008	5/30/2008	In Progress				
159	12/15/2006	12/15/2006 12/15/2006	Active Active	WT	W	100		Kern	CA	SCE	66kV Rosamond-Delsur line 66kV Antelope-Neenach-Bailey line	5/30/2008	5/30/2008 5/30/2008	In Progress In Progress				
159A	12/6/2006	12/22/2006	Active	WT	W	400		La Rumorosa, Baja CA	Mexico	SDGE	500kV Imperial Valley-Miguel transmission line	6/1/2009	6/1/2009	Complete	In Progress			
160	12/2/2006	12/29/2006	Withdrawn 9/17/07	ST	Ş	220		San Bernardino	CA	SCE	Kramer	1/1/2009	1/1/2009	In Progress				
161 162	12/27/2006 11/16/2006	1/4/2007 1/5/2007	Active	CT ST	NG S	202 114	-	Los Angeles	CA	SCE SCE	Harbor Cogen Loop new sub connecting Eldorado-Mtn Pass 115kV line	5/1/2009 6/30/2010	5/1/2010 6/30/2010	Waived	Complete In Progress	In Progress		
163	1/9/2006	1/9/2007	Active Active	PV	S	300		San Bernardino San Bernardino	CA CA	SCE	Mountain Pass Substation	12/31/2010	12/31/2010	Waived In Progress	In Progress			
164	1/12/2007	1/12/2007	Active	WT	W	1000		La Rumorosa, Baja CA	Mexico	SDGE	Imperial Valley 230kV switchyard	10/1/2010	10/1/2010	In Progress				
165	1/16/2007	1/16/2007	Active	ST	S	400		San Bernardino	CA	SCE	Pisgah 230kV Substation bus	6/30/2011	6/30/2011	In Progress				
166	1/23/2007	1/23/2007	Active	PV	S	210		San Luis Obispo	CA	PGE	Morrow Bay-Midway 230kV line 500kV line to Midpoint Switching Station	12/31/2010	12/31/2010	Complete	In Progress			
167 168	1/25/2007 2/2/2007	1/25/2007 2/2/2007	Withdrawn 5/16/07 Active	CC WT	NG W	700 1000		Riverside La Rumorosa, Baja CA	CA Mexico	SDGE	Imperial Valley 500kV bus	6/1/2012 12/31/2011	6/1/2012 12/31/2011	Tendered In Progress				
169	2/2/2007	2/2/2007	Active	ST	S	211.6	<u> </u>	Imperial	CA	SDGE	Imperial Valley 230kV bus	12/31/2011	12/31/2011	In Progress				
170	2/2/2007	2/2/2007	Active	ST	S	500		Kern	CA	SCE	Substation 5 (aka Whirlwind)	12/31/2011	12/31/2011	In Progress				
171	2/9/2007	2/9/2007	Active	WT	W	500		Solano	CA	PGE	Vaca-Tesla 500kV line	12/31/2011	12/31/2011	In Progress				
172 173	2/8/2007 2/16/2007	2/15/2007 2/16/2007	Active Active	CC CT	NG NG	508 49.9	-	San Joaquin San Diego	CA CA	PGE SDGE	Tesla-Bellota 230kV lines Pala 69kV Substation	5/15/2011 5/1/2008	5/15/2011 5/1/2008	Complete Waived	In Progress Complete	In Progress		
173 174	2/16/2007 2/16/2007	2/16/2007 2/16/2007	Withdrawn 6/12/07	WT	₩	49.9 30		Riverside	CA	SDGE	Devers Venwind 115kV line	12/1/2008	5/1/2008 12/1/2008	Tendered	Complete	iii riogiess		
175	2/21/2007	2/21/2007	Active	WT	W	500		Kern	CA	SCE	SCE Proposed Whirlwind 230kV Substation	9/30/2008	9/30/2008	In Progress				
176	2/23/2007	2/23/2007	Active	CT	NG	49.9		San Diego	CA	SDGE	Margarita 138kV Substation	5/1/2008	5/1/2008	Waived	Complete	Complete		
177	2/27/2007	2/28/2007	Active	WT	W	100		Contra Costa	CA	PGE	Bahia – Moraga 230 kV Line	12/31/2011	12/31/2011	Complete	In Progress			
178 178A	2/27/2007 2/27/2007	2/28/2007 2/28/2007	Withdrawn 11/19/07 Active	WT WT	W W	100 500		Merced Mexicali/Ensenada/Tecate	CA Mexico	PGE SDGE	Los Banos 230kV bus near Pacheco Pass Miguel 230kV Bus	12/31/2011 6/15/2010	12/31/2011 6/15/2010	Complete In Progress	In Progress			
178B	2/27/2007	2/28/2007	Active	WT	W	1000		Mexicali/Ensenada/Tecate	Mexico	SDGE	Imperial Valley 230kV Substation	6/15/2010	6/15/2010	In Progress				
179	2/15/2007	3/1/2007	Active	ST	S	300		San Bernardino	CA	SCE	Julian Hinds 230kV Substation	12/31/2010	12/31/2010	In Progress				
180	3/2/2007	3/2/2007	Active	CC	NG	564		San Bernardino	CA	SCE	New 230kV Switchyard on the Mira Loma-Vista #2 line	5/1/2011	5/1/2011	In Progress				

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					rating	Maximu	ım MWs	Location			Point of Interconnection				Stu	ıdy Availability		
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181	3/2/2007	3/2/2007	Active	CT	NG	400		San Bernardino	CA	SCE	New 230kV switchyard on the Chino-Serrano line	3/1/2010	3/1/2010	In Progress				
182 183	3/5/2007 3/5/2007	3/5/2007 3/5/2007	Active Active	PV WT	S W	500 300		Kern La Rumorosa, Baja CA	CA Mexico	SCE SDGE	Tehachapi Conceptual Substation 500kV Imperial Valley-Miguel transmission line	12/31/2010 11/1/2009	12/31/2010 11/1/2009	In Progress In Progress				
184	3/5/2007	3/5/2007	Active	ST	G	35		Sonoma	CA	PGE	Geysers #3 – Cloverdale 115 kV Line	1/1/2010	1/1/2010	Complete	In Progress			
185	3/6/2007	3/6/2007	Active	ST	G	150		Mineral	NV	SCE	Bishop, CA Control Sub	8/1/2011	1/1/2011	Waived	In Progress			
186 187	3/7/2007 3/14/2007	3/7/2007 3/14/2007	Withdrawn 11/28/07 Active	CT ST	NG G	211 50		San Joaquin Sonoma	CA CA	PGE PGE	Stockton"A"-Lockeford-Bellota 115kV #1 lines & Tesla-Tra Geysers-Fulton 230kV transmission line	12/31/2009 1/1/2011	12/31/2009 1/1/2011	Complete Waived	Complete	Tendered		
188	3/23/2007	3/23/2007	Active	WT	W	200		Kern	CA	SCE	Windhub Substation	12/15/2013	12/15/2013	In Progress	Complete	rendered		
189	3/30/2007	3/30/2007	Active	CC	NG	280		San Diego	CA	SDGE	Encina 138kV Substation	5/1/2010	5/1/2010	Waived	Complete	Tendered		
190 191	3/30/2007 4/2/2007	3/30/2007 4/2/2007	Active Withdrawn 10/1/07	CT CT	NG NG	330 315		San Diego San Diego	CA CA	SDGE SDGE	Proposed Otay Mesa Energy Center 230kV Substation Penasquistos-Old Town 230kV transmission line	3/1/2011 3/1/2010	3/1/2011 3/1/2010	Complete Complete	In Progress Tendered			
192	4/2/2007	4/2/2007	Withdrawn 10/1/07	GT	NG	315		San Diego	CA	SDGE	San Luis Rey Mission 230kV transmission line	3/1/2010	3/1/2010	Complete	Tendered			
193	3/19/2007	4/4/2007	Active	ST	S	500		Riverside	CA	SCE	Julian Hinds 230kV Substation	12/31/2010	12/31/2010	In Progress				
194 195	4/5/2007 4/6/2007	4/5/2007 4/6/2007	Active Withdrawn 9/21/07	ST CC	S NG	190 725		San Luis Obispo Kern	CA CA	PGE SCE	230kV lines near Carrizo Plain Substation Springerville-Magunden 230kV line	12/31/2010 1/1/2013	12/31/2011 1/1/2013	Complete Waived	In Progress In Progress			
196	4/13/2007	4/13/2007	Active	CT	NG	508		Madera	CA	PGE	230kV bus at Borden Substation	7/1/2011	7/1/2011	In Progress	III I I Ogi Goo			
197	4/16/2007	4/16/2007	Withdrawn 12/3/07	CT	NG	315		San Diego	CA	SDGE	Otay Mesa 230kV switchyard	12/1/2011	12/1/2011	Complete	Tendered			
198 199	4/18/2007 4/19/2007	4/18/2007 4/19/2007	Withdrawn 1/11/08 Active	CT CT	NG NG	400 50		San Diego San Joaquin	CA CA	SDGE PGE	OMEC interconnection substation 60kV bus at Posdef QF facility	2/28/2010 12/31/2009	2/28/2010 12/31/2009	Complete Waived	Tendered In Progress			
200	4/19/2007	4/19/2007	Withdrawn 5/14/07	CT	NG NG	200		Riverside	CA	SCE	Mira Loma Substation	5/31/2010	5/31/2010	vvalveu	iii i iogiess			
201	4/19/2007	4/19/2007	Active	CT	NG	99		San Diego	CA	SDGE	Pala Substation	5/31/2008	5/31/2008	Waived	Complete	In Progress		
202	4/19/2007 4/19/2007	4/19/2007 4/19/2007	Active Active	WT WT	W	198.65 198.65		San Bernardino San Bernardino	CA CA	SCE SCE	Kramer-Coolwater 220kV Line #1 Coolwater-Tortilla 115kV line	11/15/2013 11/15/2013	11/15/2013 11/15/2013	In Progress In Progress				
203	4/19/2007	4/19/2007	Active	WT	W	149.4		San Bernardino	CA	SCE	Tortilla-Kramer 115 kV line	11/15/2013	11/15/2013	In Progress				
205	4/20/2007	4/20/2007	Active	Other	S	600		Clark	NV	SCE	El Dorado 220kV Switchyard	12/31/2007	12/31/2007	In Progress				
206	4/23/2007	4/23/2007	Withdrawn 6/20/07	CC	S	200		Los Angeles	CA	SCE	El Segundo 230kV Switchyard	1/30/2013	1/30/2013	In Drograss				
207 208	4/26/2007 4/20/2007	4/26/2007 5/3/2007	Active Active	CC PV	NG S	557 2		Los Angeles Alameda	CA CA	SCE PGE	Long Beach 230kV Switchyard Tracy-Herdlyn 69kV line	2/30/2013 6/1/2008	2/30/2013 9/1/2008	In Progress NA	Waived	In Progress		
209	5/2/2007	5/3/2007	Active	WT	W	400		La Rumorosa, Baja CA	Mexico	SDGE	New 230/500kV substation near the 500kV IV-ML line	12/31/2010	12/31/2010	In Progress				
210	5/3/2007	5/3/2007	Active	PV	S	600		Riverside	CA	SCE	Eagle Mountain Substation	12/31/2011	12/31/2011	In Progress				
211 212	4/23/2007 5/9/2007	5/4/2007 5/9/2007	Active Active	WT WT	W	201 50		Lassen Humboldt	CA CA	PGE PGE	Caribou 230kV Substation Bridgeville Substation	10/31/2008 10/30/2010	10/31/2008 10/30/2010	In Progress Complete	In Progress			
213	5/9/2007	5/9/2007	Active	WT	W	180		San Bernardino	CA	SCE	Coolwater 220kV bus	11/15/2010	11/15/2010	In Progress	III Togress			
214	5/10/2007	5/10/2007	Active	WT	W	49.25		San Bernardino	CA	SCE	Coolwater-Kramer 115 kV line	12/15/2013	12/15/2013	In Progress				
215 216	5/21/2007 5/22/2007	5/21/2007 5/22/2007	Active Withdrawn 7/24/07	WT CT	W NG	420 98.8		La Rumorosa, Baja CA San Diego	Mexico CA	SDGE SDGE	Imperial Valley-Miguel 500kV Otay Mesa Energy Center	5/1/2011 3/31/2010	5/1/2011 3/31/2010	In Progress				
217	5/22/2007	5/22/2007	Withdrawn 7/24/07	GT	NG	98.8		San Diego	CA	SDGE	San Luis Rey Melrose 69kV	3/31/2010	3/31/2010					
218	5/22/2007	5/22/2007	Withdrawn 7/24/07	CT	NG	98.8		San Diego	CA	SDGE	Loop Talega Escondido 230kV line	3/31/2010	3/31/2010					
219 220	5/7/2007 5/23/2007	5/23/2007 5/23/2007	Active Active	CT PV	NG S	50 450		Riverside San Bernardino	CA CA	SCE SCE	Midpoint switching station Kramer-BLM West 220kV Line	6/1/2012 12/1/2011	6/1/2012 12/1/2011	In Progress In Progress				
221	5/23/2007	5/23/2007	Active	PV	S	450		San Bernardino	CA	SCE	Kramer-Coolwater 220kV Line #1	12/1/2011	12/1/2011	In Progress				
222	5/23/2007	5/23/2007	Active	WT	W	100.5		Solano	CA	PGE	Birds Landing substation	12/31/2010	12/31/2010	In Progress				
223 224	5/29/2007 5/23/2007	5/29/2007 5/30/2007	Active Withdrawn 7/23/07	WT RE	W NG	170		San Bernardino San Diego	CA CA	SCE SDGE	Kramer-Coolwater 220kV Line #1 69kV line next to Calpeak Border site	12/31/2010	12/31/2010 5/1/2010	In Progress				
225	5/23/2007 5/23/2007	6/4/2007	Active	CC	NG	640		Riverside	CA	SCE	500kV line to the new Midpoint switching station	5/1/2010 6/1/2012	6/1/2012	In Progress			1	
226	5/16/2007	6/5/2007	Active	CC	NG	620		San Diego	CA	SDGE	New double circuit 230kV line into Escondido Substation	3/30/2012	3/30/2012	Complete				
227 228	6/14/2007 6/20/2007	6/14/2007 6/20/2007	Active Withdrawn 10/22/07	WT CT	W NG	175 630		Marin Alameda	CA CA	PGE PGE	Fulton-Ignacio 230kV #2 line Newark Substation 230kV bus	12/31/2010 6/1/2011	12/31/2010 6/1/2011	Complete Tendered	Tendered			
229	6/21/2007	6/21/2007	Active	PV	S	1000		San Bernardino	CA	SCE	Devers Substation	12/31/2013	12/31/2013	In Progress			1	
230	6/21/2007	6/21/2007	Active	PV	S	1000		San Bernardino	CA	SCE	Devers Substation	12/31/2013	12/31/2013	In Progress				
231	6/13/2007 6 /26/2007	6/25/2007	Active Withdrawn 8/6/07	WT	W NG	50		Riverside San Diego	CA	SCE SDGE	Venwind portion of Devers-Garnett-Venwind line Talega-Escondido 230kV line	12/1/2009 5/15/2010	12/1/2009 5/15/2010	In Progress				
232 233	6/2 5 /2 007 6/27/2007	6/26/2007 6/27/2007	Active	RE ST	S	99 200		San Diego San Bernardino	CA CA	SCE	New sub connecting to Mtn Pass-Wheaton 230kV line	6/30/2012	6/30/2012	Waived	In Progress			
234	6/27/2007	6/27/2007	Active	ST	S	400		Clark	NV	SCE	New sub connecting to Mtn Pass-Wheaton 230kV line	6/30/2013	6/30/2013	In Progress				
235	6/29/2007	6/29/2007	Active	CT	NG	630		Contra Costa	CA	PGE	Tesla-Tracy #1 230kV line	6/1/2011	6/1/2011	In Progress				
236 237	6/29/2007 6/12/2007	6/29/2007 7/2/2007	Active Active	CT CC	NG NG	630 634		San Joaquin Clark	CA NV	PGE SCE	Tesla Substation 230kV bus Eldorado 220kV switchyard	6/1/2011 5/1/2011	6/1/2011 5/1/2011	In Progress Waived	In Progress			
238	7/11/2007	7/11/2007	Active	PV	S	45		San Luis Obispo	CA	PGE	Temblor-San Luis Obispo 115kV line	12/1/2008	12/1/2008	In Progress				
239	7/11/2007	7/11/2007	Active	PV	S	250		San Luis Obispo	CA	PGE	Midway-Morro Bay 230kV line	12/1/2010	12/1/2010	In Progress				
240 241	7/12/2007 7/12/2007	7/12/2007 7/12/2007	Active Active	ST ST	S	400 400		San Bernardino San Bernardino	CA CA	SCE SCE	Pisgah Sub 230kV Pisgah Sub 230kV	6/30/2014 6/30/2015	6/30/2014 6/30/2015	In Progress Tendered			<u> </u>	
242	7/13/2007	7/13/2007	Active	PV	S	390		San Luis Obispo	CA	PGE	Morro Bay-Midway 230kV line	9/1/2012	9/1/2012	In Progress				
243	7/16/2007	7/16/2007	Active	WT	W	429		San Bernardino	CA	SCE	Pisgah 230kV Substation	12/30/2010	12/30/2010	In Progress				
244 245	7/16/2007 7/16/2007	7/16/2007 7/16/2007	Active Active	WT WT	W	120 228		Kern and Inyo	CA CA	SCE SCE	Haiwee-Inyokern 115kV line	12/15/2010 12/15/2010	12/15/2010 12/15/2010	In Progress				
245	7/16/2007	7/16/2007	Active	WT	W	120		Riverside Kern	CA	SCE	Devers-Mirage-Julian Hinds 230kV line Inyokern-Kramer 115kV line #3	12/15/2010	12/15/2010	In Progress Tendered				
247	7/30/2007	7/30/2007	Active	CC	NG	67		Madera	CA	PGE	Borden Substation 230kV Bus	7/1/2011	7/1/2011	Waived	Tendered			
248	7/30/2007	7/30/2007	Active	CC	NG	67		San Joaquin	CA	PGE	Tesla-Bellota 230kV line	5/15/2011	5/15/2011	Waived	In Progress		<u> </u>	

Notes

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- Fuel Type Key: W=Wind, NU=Nuclear, NG=Natural Gas, O=Oil, C=Coal, B=Biomass, S=Solar, LFG=Land Fill Gas, WTR=Water, G=Geothermal, HR=Heat Recovery

					erating cility	Maximu	m MWs	Location	1		Point of Interconnection			Study Availability				
Queue Position	Interconnection Request Receive Date	Queue Date	Application Status	Туре	Fuel	Summer	Winter	County	State	Utility	Station or Transmission Line	Proposed On-line Date (as filed with IR)	Current On-line Date	Feasibility Study (IFS)	System Impact Study (SIS)	Facility Study (FAS)	Optional Study (OS)	Interconnection Agreement Status
249	7/30/2007	7/30/2007	Active	WT	W	200		Monterey	CA	PGE	Moss-Linding-Salinas-Soledad 115kV #1 and #2 lines	2/1/2010	2/1/2010	In Progress				
250	7/30/2007	7/30/2007	Active	WT	W	200		Lake and Colusa	CA	PGE	Redbud-Cortina 115kV line	8/1/2009	8/1/2009	Complete	Tendered			
251	8/1/2007	8/1/2007	Active	PV	S	200		Riverside	CA	SCE	Eagle Mountain-Blythe 161kV line	12/15/2009	12/15/2009	In Progress				
252	7/10/2007	8/6/2007	Active	ST	NG	12.72		Los Angeles	CA	SCE	Redondo Beach Generating Station 220kV switchyard	5/23/2007	5/23/2007	Waived	In Progress			
253	8/13/2007	8/13/2007	Active	WT	W	40		Santa Barbara	CA	PGE	Cabrillo Substation 115kV	12/31/2011	12/31/2011	In Progress				
254	8/21/2007	8/21/2007	Active	CC	NG	600		Kings	CA	PGE	Gates Substation 230kV bus	6/1/2012	6/1/2012	In Progress				
255	8/23/2007	8/23/2007	Active	ST	S	750		Kern	CA	SCE	Inyokern Substaion	12/28/2010	12/28/2010	In Progress				
256	8/23/2007	8/23/2007	Withdrawn 9/18/07	₽V	S	30		Fresno	CA	PGE	Mendota Biomass Substation	4/15/2009	4/15/2009					
257	9/10/2007	9/10/2007	Active	CC	NG	575		Solano	CA	PGE	New Fairfield Substation 230kV bus	6/1/2011	6/1/2011	In Progress				<u> </u>
258	9/12/2007	9/12/2007	Active	CC	NG	520		Contra Costa	CA	PGE	Contra Costa Substation 230kV bus	2/1/2012	2/1/2012	Tendered				<u> </u>
259	9/12/2007	9/12/2007	Active	CC	NG	345		Sutter	CA	PGE	Rio Oso Substation 115kV bus	2/1/2012	2/1/2012	Tendered				<u> </u>
260	9/12/2007	9/12/2007	Active	CC	NG	260		San Joaquin	CA	PGE	Loop Gold Hill-Eight Mile Road 230kV line	2/1/2012	2/1/2012	Tendered				
261	9/28/2007	9/28/2007	Active	CC	NG	104		Los Angeles	CA	SCE	Hinson Substation 220kV	10/1/2010	10/1/2010					
261A	10/9/2007	10/9/2007	Active	PV	S	5		Fresno	CA	PGE	Mendota-San Joaquin-Helm 70kV line	4/15/2009	4/15/2009					
262	10/10/2007	10/10/2007	Active	RE	NG	390.6		Solano	CA	PGE	Birds Landing Substation 230 kV Bus	4/15/2012	4/15/2012	In Progress				
263	10/10/2007	10/10/2007	Active	CC	NG	634		Clark	NV	SCE	Eldorado Switchyard 220kV & NCP Merchant Substation 230kV	5/1/2011	5/1/2011	Waived	Tendered			
264	10/15/2007	10/15/2007	Active	WT	W	300		San Bernardino	CA	SCE	New substation connected to Mohave-Lugo 500kV Line	12/30/2010	12/30/2010	Tendered				
265	10/16/2007	10/16/2007	Withdrawn 12/5/07	₽V	\$	25		Riverside	CA	SCE	Eagle Mountain-Blythe 161kV line	12/1/2009	12/1/2009					↓
266	10/19/2007	10/19/2007	Active	CC	NG	325		Sutter	CA	PGE	Rio Oso Substation 230kV bus	2/1/2012	2/1/2012	Tendered				↓
267	10/23/2007	10/23/2007	Active	CC	NG	280		San Joaquin	CA	PGE	Gold Hill-Eight Mile 230kV lines	4/16/2012	4/16/2012	In Progress				↓
268	10/24/2007	10/24/2007	Active	ST	NG	145		San Joaquin	CA	PGE	Tesla-Manteca 115kV line via Schulte Switchyard	4/1/2013	4/1/2013	Waived	Tendered			↓
269	10/30/2007	10/31/2007	Active	RE	NG	371.3		San Joaquin	CA	PGE	Tesla Substation 230kV bus	4/15/2012	4/15/2012	In Progress				↓
270	11/1/2007	11/1/2007	Active	PV	S	700		Riverside	CA	SCE	Proposed Midpoint Substation 230kV	12/1/2011	12/1/2011					↓
271	11/1/2007	11/1/2007	Active	PV	S	400		San Bernardino	CA	SCE	Lugo-Pisgah 230kV line	12/1/2012	12/1/2012	In December				↓
272	11/1/2007	11/1/2007	Active	CC/PV	NG/S	150		Kings	CA	PGE	Henrietta Substation 70kV bus	5/1/2010	5/1/2010	In Progress	Tandanad			
273	11/1/2007	11/1/2007	Active	CC/PV	NG/S	99.9		Kings	CA	PGE	Hanford Switchyard 115kV bus	5/1/2010	5/1/2010	Waived	Tendered			
274 275	11/5/2007 11/7/2007	11/5/2007 11/7/2007	Active	CC	NG NG	54 630		San Diego	CA	SDGE	Palomar Substation 230kV	6/1/2008	6/1/2008	Waived	Tendered			
275	11/9/2007	11/9/2007	Active Active	CT CC	NG	650		Solano Contra Costa	CA CA	PGE PGE	Loop Vaca Dixon-Peabody & Vaca Dixon-Lambie 230 kV lines	9/1/2012 1/15/2012	9/1/2012 1/15/2012	In Progress Tendered				╆━━━
277	11/15/2007	11/9/2007	Active	WT	W	75		San Bernardino	CA	SCE	Contra Costa Switchyard 230kV bus Coolwater-Dunn Siding 115kV line	11/15/2012	11/15/2012	rendered				
278	11/26/2007	11/26/2007	Active	ST	S	565		San Bernardino	CA	SCE	Mojave-Lugo 500kV line	1/1/2011	1/1/2011	1				
279	11/30/2007	11/30/2007	Active	H	WTR	40		Humboldt	CA	PGE	Fairhaven Substation 60kV bus	6/1/2012	6/1/2012	Tendered				
280	11/30/2007	11/30/2007	Active	H	WTR	40		Mendocino	CA	PGE	Fort Bragg Substation 60kV bus	6/1/2012	6/1/2012	rendered				
281	12/3/2007	12/3/2007	Active	CC	NG	500		San Joaquin	CA	PGE	Loop Tesla-Stagg and Tesla-Eight Mile 230kV lines	12/31/2010	12/31/2010	1				<u> </u>
282	12/11/2007	12/12/2007	Active	ST	В	29		Madera	CA	PGE	Tap Dairyland-Mendota 115 kV line	5/31/2008	12/31/2008	1				<u> </u>
283	12/12/2007	12/12/2007	Active	ST	S/B	106.8		Fresno	CA	PGE	Gates Substation 230kV bus	3/1/2010	3/1/2010	1				<u> </u>
284	12/13/2007	12/13/2007	Active	RE	NG	115		Mendocino	CA	PGE	Ukiah Substation 115kV bus	4/15/2012	4/15/2012	1				<u> </u>
285	12/13/2007	12/13/2007	Active	WT	W	150		San Bernardino	CA	SCE	Pisgah Substation 230kV	12/31/2011	12/31/2011					
286	12/20/2007	12/20/2007	Active	ST	S	375		Imperial	CA	SDGE	Southwest Power Link 500kV line	7/1/2011	7/1/2011					
287	12/21/2007	12/21/2007	Active	ST	S	231		Kern	CA	SCE	Antelope-Magunden 230kV	4/1/2011	4/1/2011					
288	12/20/2007	12/21/2007	Active	ST	S	375		San Luis Obispo	CA	PGE	Morro Bay-Gates 230kV line	7/1/2011	7/1/2011					
289	12/20/2007	12/21/2007	Active	ST	S	375		San Bernardino	CA	SCE	El Dorado-Ivanpah 115kV line	7/1/2011	7/1/2011					
290	12/27/2007	12/27/2007	Active	ST	S	750		San Bernardino	CA	SCE	Pisgah Substation 230kV	6/1/2015	6/1/2015					
291	12/27/2007	12/27/2007	Active	ST	S	250		San Bernardino	CA	SCE	Wheaton Substation	6/1/2015	6/1/2015					
292	12/27/2007	12/27/2007	Active	ST	S	250		Kern	CA	SCE	SCE portion of Kramer-BLM West 230 kV line	6/1/2014	6/1/2014					
293	1/3/2008	1/3/2008	Active	RE	В	5.2		Fresno	CA	PGE	Helm-Kerman 70kV line	6/1/2009	6/1/2009					1

Notes

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Technical Area: Transmission System Engineering

Data Request 53:

Please provide the Facility Study Report.

Response:

The Facility Study Report is not yet available. It is not expected to be available until June 2008. A copy of the Facility Study Report will be provided when it is available.

Technical Area: Visual Resources

Data Request 54:

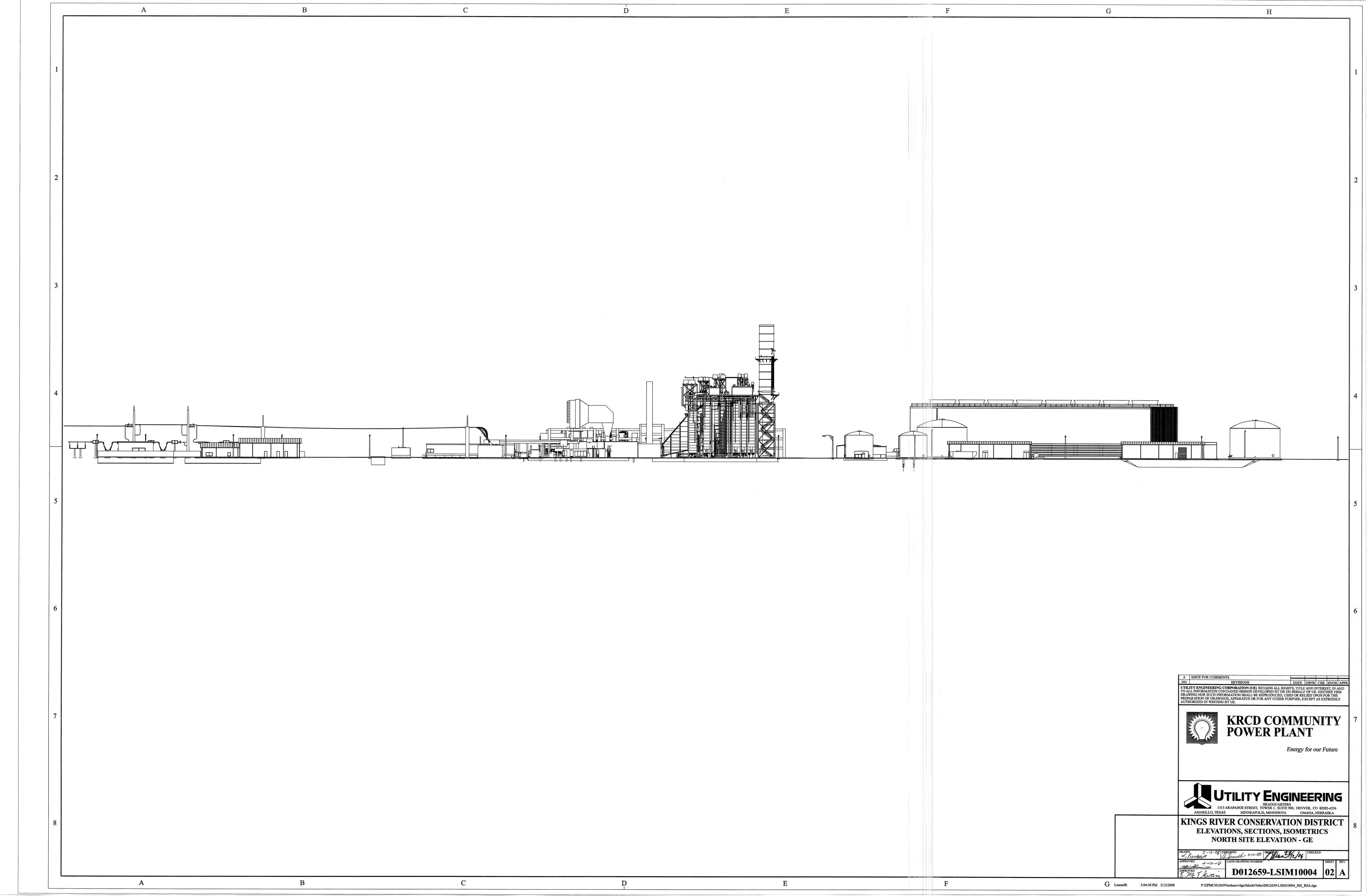
In order to allow comparison of the appearance of the two possible unit types, please provide a site plan and scaled elevation drawings from two axes of the project with GE 7FA units.

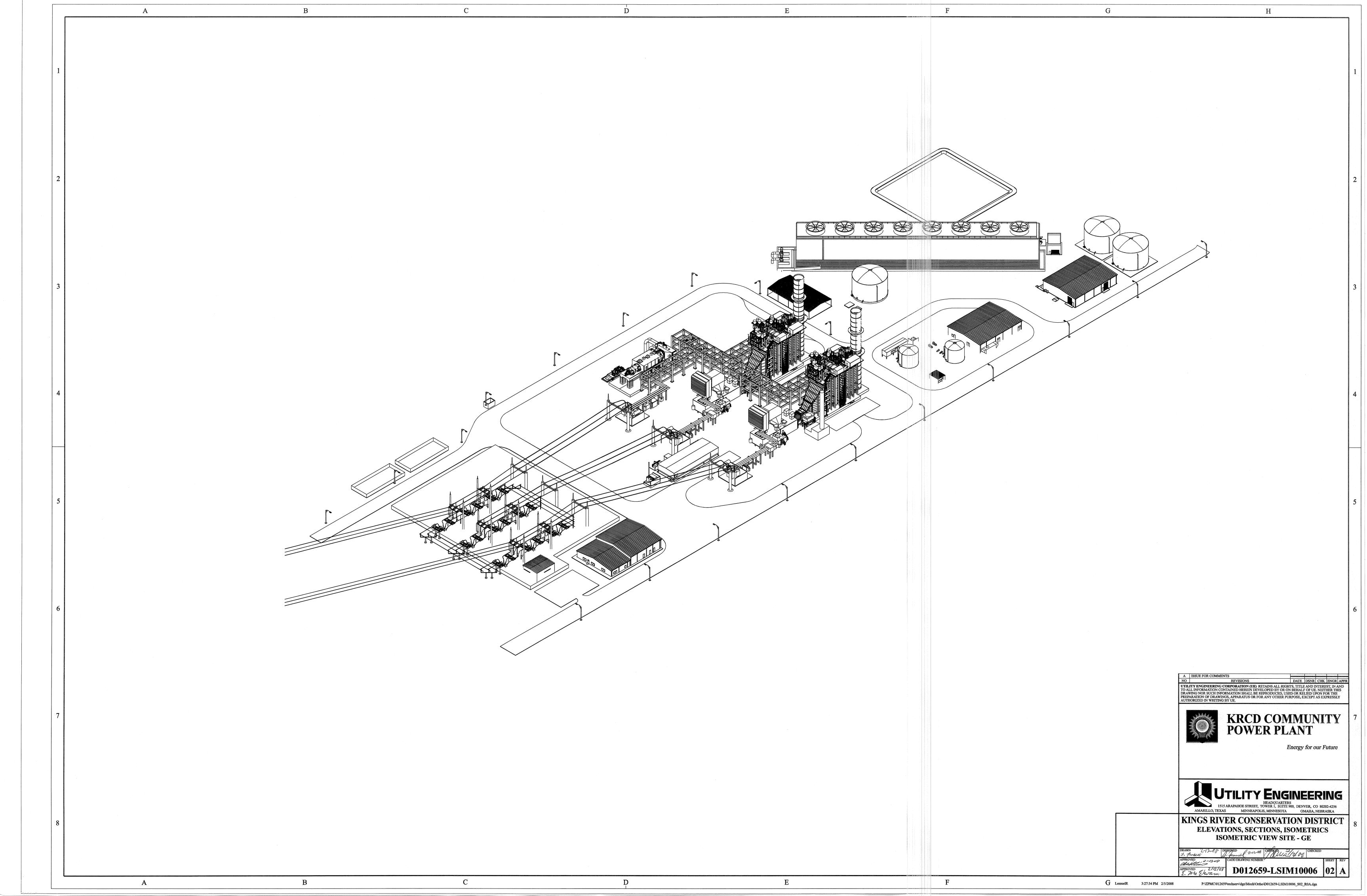
Response:

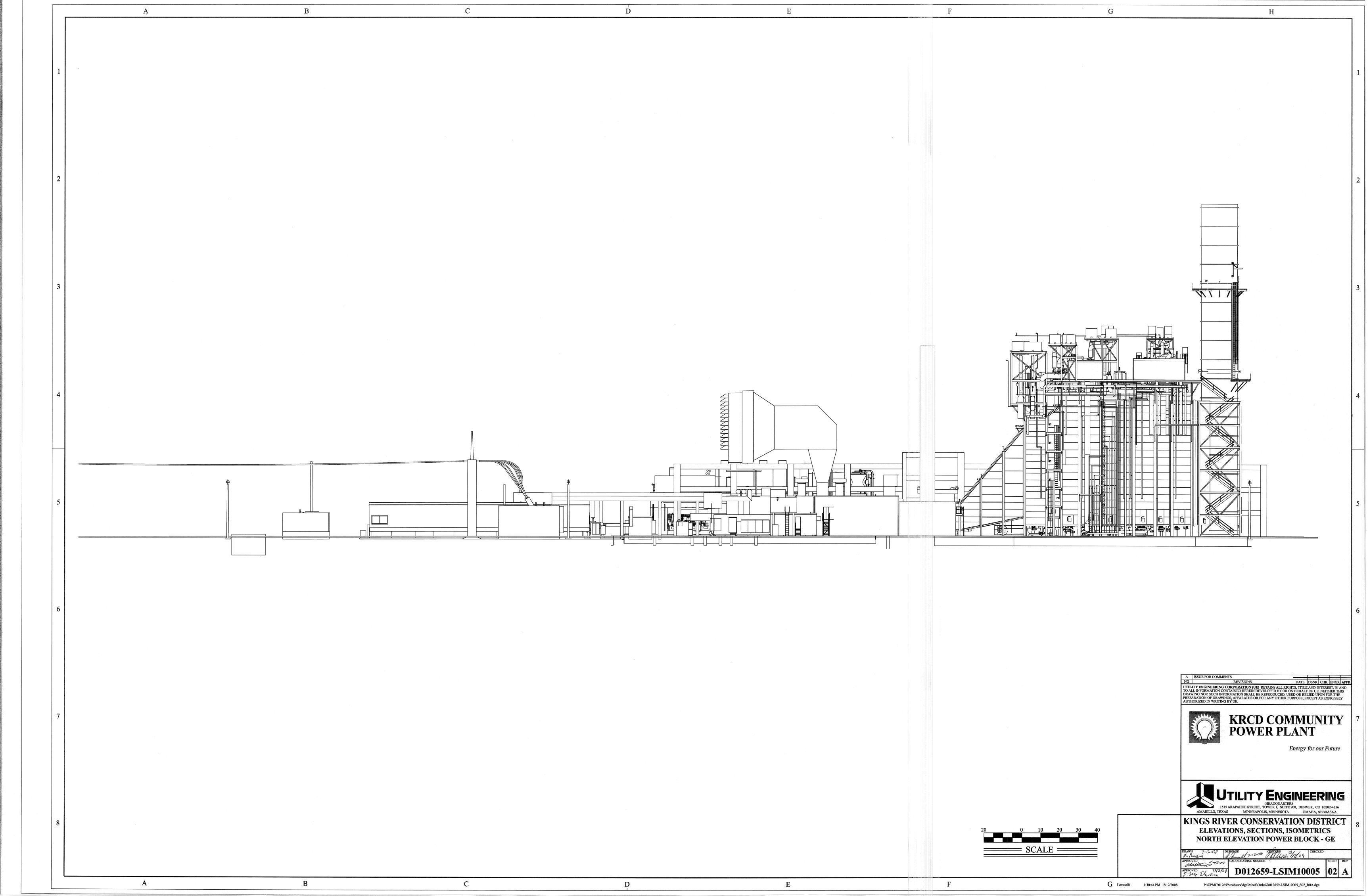
Please see Attachment Vis-1.

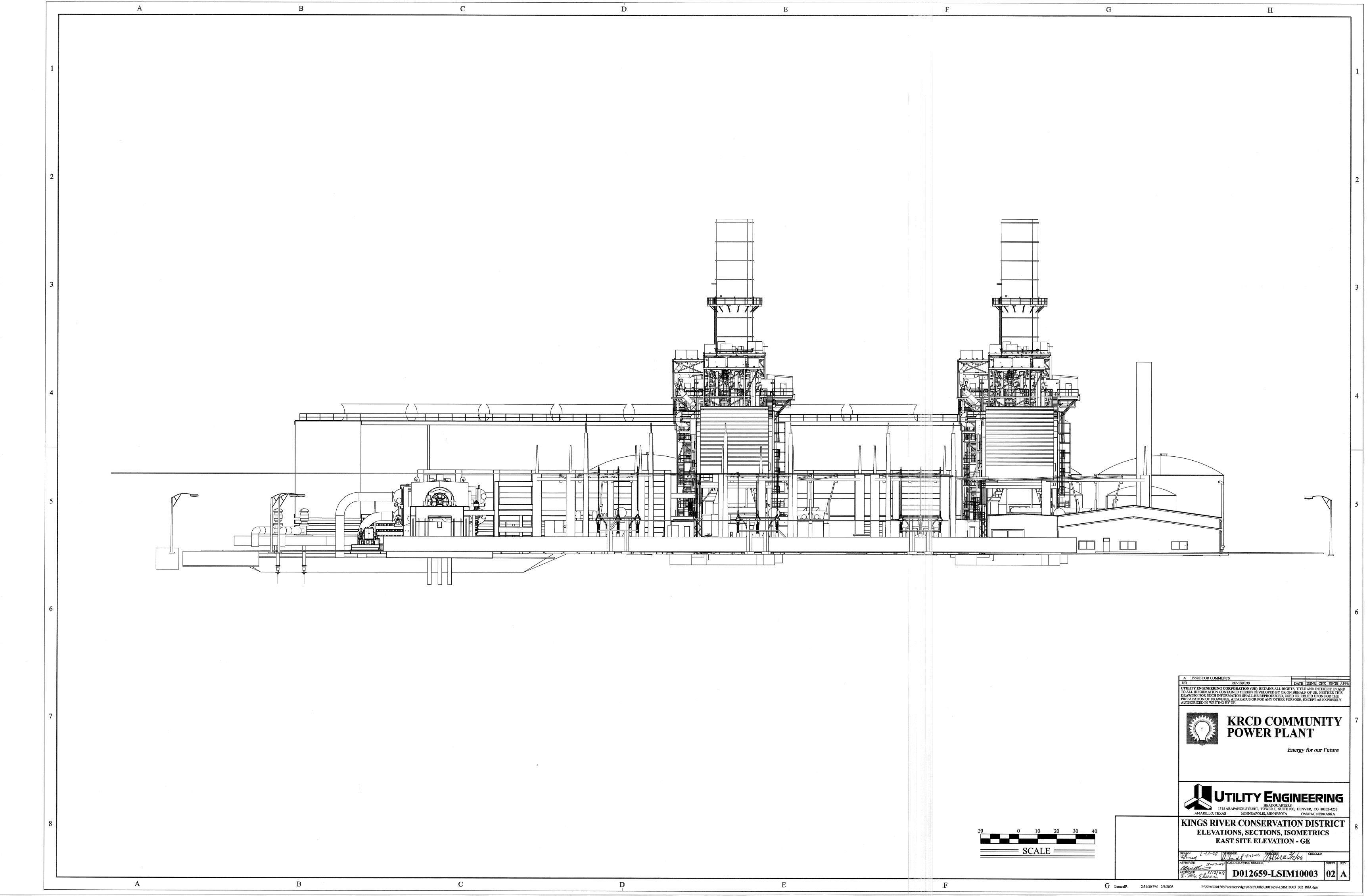
ATTACHMENT VIS-1

Engineering Drawings – GE 7FA Units









Technical Area: Visual Resources

Data Request 55:

Please provide the cooling tower manufacturer and model number information and a fogging frequency curve from the cooling tower vendor, if available.

Response:

The cooling tower manufacturer for the KRCD CPP has not yet been selected and the information requested is not yet available. KRCD will update the CEC within the next 30 days to assist with cooling tower technical information.

Technical Area: Visual Resources

Data Request 56:

Please provide the Seasonal Annual Cooling Tower Impact (SACTI) model input/output files, including the meteorological data input files, from the modeling analysis that was summarized in Appendix 8.3-1.

Response:

Seasonal Annual Cooling Tower Impact (SACTI) model input/output files were previously provided to the CEC under separate cover.

Technical Area: Waste Management

Data Request 57:

Please provide tables that separate demolition/construction and operation that reconcile the number found in Section 1.7.9.

Response:

Below is a table that separates demolition/construction and operation that reconciles the number found in AFC Section 1.7.9.

S	olid Waste
Construction Phase	<u>Tons</u>
Construction Debris	
Paper, Wood, Glass, Plastic	100
Concrete	75
Metal	25
Total	200
Demolition of Existing Structures	s
Paper, Wood, Glass, Plastic	5
Concrete	4
Metal	1
Total	10
Operating Phase	Tons/Year
Non-Hazardous	
Zero Liquid Discharge System	1,500
General Waste	22
Hazardous	3
Total	1,525

Technical Area: Waste Management

Data Request 58:

Please conduct an asbestos survey and provide an estimate of the amount of asbestos in demolition/construction table. Indicate the method and location of disposal.

Response:

KRCD is currently working on this data request and expects to file a response in March 2008.

Technical Area: Waste Management

Data Request 59:

Please collect and analyze soil samples around the 500-gallon tank. Provide information on the method of disposal to be used for the 500-gallon underground storage tank.

Response:

KRCD is currently working on this data request and expects to file a response in March 2008.

Technical Area: Waste Management

Data Request 60:

Please provide a draft engineering report per the provisions of Title 22 Code of Regulations Section 60323 that identifies:

- a. all agencies or entities that will be involved in the design, treatment, distribution, construction, operation and maintenance of the recycle facilities;
- b. description of any legal arrangements outlining authorities and responsibilities between the agencies with respect to treatments; and
- c. a description of arrangements for coordinating all reuse-related activities between the two WWTPs and the Applicant.

Response:

KRCD is currently working on this data request and expects to file a response in March 2008.

Technical Area: Waste Management

Data Request 61:

Provide a full description and schematic of the tertiary treatment train for the Title 22 RWF system; and a discussion of all previous experience in producing tertiary treated recycled water.

Response:

Description:

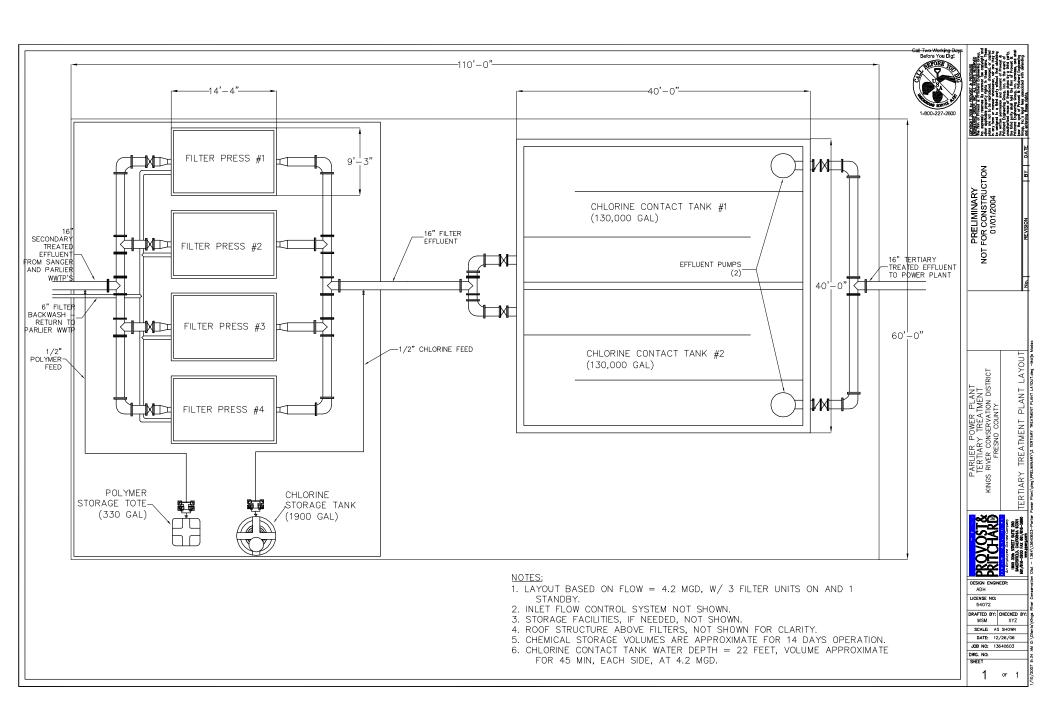
The Tertiary Wastewater Treatment process at the plant will receive water from the nearby Sanger and Parlier Wastewater Treatment Plants (WWTPs) via new underground pipelines. The pipelines contain secondary treated effluent from the plants and the water will be processed for make-up water through a tertiary treatment process. As seen on the preliminary schematic drawing, included as Attachment Waste-1, this process involves a set of parallel filter presses, reagent injection points and two chlorine contact tanks. The wastewater treatment plant effluent flows through a 16-inch pipeline header which splits into four pipelines going to each of the four filter presses. Three of the filters are normally on and the fourth is used for a standby unit. A polymer is fed through a half-inch line into the header before the filters for coagulation purposes. Backwash from each of the filters flows to the backwash header which then returns to Parlier WWTP. The process water then flows from each of the filters into a 16-inch header, where chlorine is injected via a half-inch feed line. Afterwards, the water splits into one of two chlorine contact tanks, each having a volume of 130,000 gallons. Based on a 4.2 million gallon per day (MGD) flow, the contact tanks are sized for 45 minutes storage/contact time each. The tertiary treated effluent is then pumped from each of the tanks for use in the power plant.

Experience:

There are several power plants throughout California and the country that use tertiary treated water for cooling tower makeup. Several are shown in Attachment Waste-2. None of the plants shown treat their recycled water on-site. Since KRCD will be treating to tertiary standards on site, KRCD will have the necessary engineering report prepared and filed with the Regional Water Quality Control Board (RWQCB). KRCD will then meet with the RWQCB and the Department of Health Services (DHS) to confirm their understanding and support of this treatment. Since none of the treated water will be used off-site, we expect that the RWQCB will issue the necessary permit in a timely fashion.

ATTACHMENT WASTE-1

Tertiary Treatment Plant Layout



ATTACHMENT WASTE-2

Power Plants Using Tertiary Treated Reclaim Water

Power Plants Using Tertiary Treated Reclaim Water for Cooling Towers										
Water User	Location	Volume	Water Source	Location	Starting Date	Comments				
Arizona Public Service Palo Verde Nuclear Plant	Wintersburg, AZ	55 MGD	91st Ave. and Tolleson WWTPs	Phoenix and Tolleson, AZ	1990	Tertiary treatment performed at power plant; all blowdown is evaporated in ponds.				
Arizona Public Service Redhawk Power Station	Arlington, AZ	3.9 MGD	91st Ave. and Tolleson WWTPs	Phoenix and Tolleson, AZ	2001	Water is sent via pipeline and is treated at the Palo Verde plant. It is then piped to Redhawk.				
Southern California Public Power Authority – new Magnolia Plant	Burbank, CA	1.0 to 1.4 MGD	Burbank WWTP	Burbank, CA	2005	The new Magnolia plant is a combined cycle plant. It is operated jointly by six cities.				
Glendale Public Service – Grayson Plant	Glendale, CA	0.3 MGD	Glendale WWTP	Glendale, CA	1979	Plant receives tertiary treated water.				
Vernon Power Plant	Vernon, CA	0.05 MGD	Oroville Region WWTP	Oroville, CA	1989					
Spadra Gas-to-Energy Plant	Pomona, CA	0.03 MGD	Pomona WRF	Pomona, CA	1991	Plant burns gas from a closed landfill to generate power.				
Puente Hills Energy Recovery Plant	Whittier, CA	0.5 MGD	San Jose Creek WRP	near Whittier, CA	1984	Plant burns gas from a closed landfill to generate power.				
Delta Energy Center	Pittsburg, CA	7.7 MGD (total for both DDSD Centers)	Delta Diablo Sanitation District (DDSD) reclamation plant	Antioch, CA	2001	Tertiary treatment is performed at the reclamation plant.				
Los Medanos Energy Center	Pittsburg, CA	7.7 MGD (total for both DDSD Centers)	Delta Diablo Sanitation District (DDSD) reclamation plant	Antioch, CA	2001	Tertiary treatment is performed at the reclamation plant.				
City of Lakeland – McIntosh Plant	Lakeland, FL	0.7 MGD	Lakeland WWTP	Lakeland, FL	1983	Tertiary treatment is performed at power plant.				
Alliant Energy	Clear Lake, IA	1.3 MGD	Clear Lake Sanitary District	Clear Lake, IA	2003	Company paid for WWTP upgrades to tertiary quality. 60–80% of the water is evaporated and the blowdown is sent back to the WWTP.				
Nevada Power Company – Clark Station	Henderson, NV	0.15 to 2.7 MGD	Clark County Water Reclamation District	Las Vegas, NV		The power company provides additional treatmen before use.				

Technical Area: Waste Management

Data Request 62:

In addition to the Energy Commission, what local and state agencies will need to review the pipeline? Please provide the names, telephone number, and address of the agencies included in this process. What permits are required to complete the pipeline? What are the timeframes of these permits?

Response:

In addition to the CEC, the KRCD will require encroachment permits from the County of Fresno, City of Parlier and City of Sanger for installation of the proposed water pipelines. Agency contact information is as follows:

Fresno County Department of Public Works and Planning - Development Services Division 2220 Tulare Street, Suite A
Fresno, California 93721
William M. Kettler - Principal Staff Analyst
wkettler@co.fresno.ca.us
(559) 262-4242

City of Parlier 1100 East Parlier Avenue Parlier, CA 93648 Bruce O'Neill, City Planner b.oneal@comcast.net (559) 256-4250

City of Sanger 1700 7th Street Sanger, CA 93657-6513 Ralph Kachadourian, Senior Planner RKachadourian@ci.sanger.ca.us (559) 876-6300 Extension 1540

It will take approximately 3 months to obtain the permits required for pipeline installation in public right-of-way. All necessary permits will be obtained prior to construction.



Technical Area: Waste Management

Data Request 63:

But for the exclusive jurisdiction of the Energy Commission, please address what permits are required to operate an on-site tertiary treatment plant?

Response:

A Title 22 Reclaimed Water Permit from the DHS will be necessary to use reclaimed waste water in the cooling tower. Please see response to Data Request 60. The plant will not discharge to the waters of the State so a RWQCB Discharge permit is not required. We are aware of no other required permitting.

Technical Area: Waste Management

Data Request 64:

Please discuss why is the tertiary treatment plant is located on the KRCD CPP projects site instead of the Parlier or Sanger WWTPs?

Response:

The tertiary treatment facility will serve only the KRCD CPP and will be owned and operated by KRCD as a part of KRCD CPP. The Parlier and Sanger WWTP do not have tertiary level treatment and disinfection facilities. These facilities will continue to operate and dispose of secondarily treated waste water under their existing permits. Operation of the KRCD CPP will be dependent on the proper operation of the tertiary treatment and disinfection facility. KRCD CPP ownership and control of the tertiary treatment and disinfection processes will also increase operating reliability.

Technical Area: Waste Management

Data Request 65:

When and how will the water well and septic tank be abandoned? What agencies will be involved with the abandonment of the well and tank? What are the procedures and schedule for abandoning the well and tank?

Response:

KRCD is currently working on this data request and expects to file a response in March 2008.

Technical Area: Waste Management

Data Request 66:

When and how will the agricultural well be abandoned? What agencies will be involved with the abandonment of the well and tank?

Response:

KRCD is currently working on this data request and expects to file a response in March 2008.

Technical Area: Waste Management

Data Request 67:

Please provide a Phase I ESA for the 26-mile 20-inch diameter underground natural gas pipeline corridor, the approximately five mile long 18-inch underground wastewater supply pipeline routes, and the approximately five mile long 230 kV transmission interconnection route which, according to ASTM 2000 guidelines crosses the following:

- a. Property where contamination is known, or suspected at an up-gradient or adjoining site.
- b. Property, which is, or has been used for industrial/manufacturing purposes. Adjoining property with this type of usage should also be included in the investigation.
- c. Property for which any prior environmental investigation indicated the potential for contamination.
- d. Property displaying evidence of hazardous waste storage on site, whether permitted or not. For example, the existence of a former dry cleaner or gas station, which utilized underground or above ground storage tanks. Agricultural properties, where pesticides were stored/mixed and potentially released, should also be investigated.
- e. Property with visible staining.
- f. Property where contaminants exceeding drinking water standards have been detected.
- g. Property where state/federal agency notices of violation have been issued.
- h. Property on which equipment containing PCBs was stored.
- i. Property where fill dirt has been brought that has, or may have originated from a contaminated site.
- j. Property with known or suspected discharges of wastewater (other than storm-water and sanitary waste) into a storm water drain.
- k. Property with an environmental lien on it (imposed either by CERCLA 42USC / 9607(1) or similar state and local laws).
- 1. Property along existing or past railroad tracks.
- m. For agricultural areas, please provide a representative sample (at least 10 percent) of all parcels randomly selected for a Determination of Pesticide Use assessment.

Response:

KRCD expects to have Phase I Environmental Site Assessments for the natural gas, water and transmission line corridors available in early April 2008.

Technical Area: Waste Management

Data Request 68:

The assessment shall identify the type of crops grown over as long a period as records indicate, the historical use and identity of pesticides (including organic and inorganic pesticides as well as herbicides), and a statement of the likelihood of finding, along the pipeline route, levels of pesticides which might present a risk to pipeline workers and/or the public.

Response:

KRCD expects to have a response available in early April 2008.

Technical Area: Waste Management

Data Request 69:

Please provide and implement a groundwater Sampling and Analysis Plan for the site. Please also discuss the remediation steps to be taken if groundwater sampling and analysis indicates contamination.

Response:

KRCD expects to have a response available in early April 2008.

Technical Area: Water and Soil Resources

Data Request 70:

Please provide a draft DESCP containing elements A through I listed below. These elements will outline site management activities and erosion/sediment control Best Management Practices (BMPs) to be implemented during site mobilization, excavation, construction, and post-construction activities. The level of detail in the draft DESCP should correspond to the current level of planning for site construction and corresponding site grading and drainage. Please provide all conceptual erosion control information for those phases of construction and post-construction that have been developed or provide a statement when such information will be available.

- a. <u>Vicinity Map:</u> A map(s) at a minimum scale 1"=100' shall be provided indicating the location of all Project elements and depictions of all significant geographic features including swales, storm drains, and sensitive areas.
- b. <u>Site Delineation:</u> All areas subject to soil disturbance, such as the construction area, laydown area, parking area, all linear facilities, and landscaping areas shall be delineated showing boundary lines and the location of all existing and proposed structures, pipelines, roads, and drainage facilities.
- c. <u>Watercourses and Critical Areas:</u> The DESCP shall show the location of all nearby watercourses including swales, storm drains, and drainage ditches. Indicate the proximity of those features to the project construction, laydown, and landscape areas and all transmission and pipeline construction corridors.
- d. <u>Drainage Map:</u> The DESCP shall provide a topographic site map(s) at a minimum scale 1"=100' showing existing, interim, and proposed drainage systems and drainage area boundaries. On the map, spot elevations are required where relatively flat conditions exist. The spot elevations and contours shall be extended off-site for a minimum distance of 100 feet in flat terrain.
- e. <u>Drainage of Project Site Narrative</u>: The DESCP shall include a narrative of the drainage measures to be taken to protect soil and water resources onsite and downstream. The narrative shall include a summary of the hydraulic analysis prepared by a professional engineer/erosion control specialist. The narrative shall state the watershed size in acres that was used in the calculation of drainage measures. The hydraulic analysis should be used to support the selection of BMPs and structural controls to divert off-site and on-site drainage around or through the construction and laydown areas.

- f. <u>Clearing and Grading Plans</u>: The DESCP shall provide a delineation of all areas to be cleared of vegetation and areas to be preserved. The plan shall provide elevations, slopes, locations, and extent of all proposed grading as shown by contours, cross-sections, or other means. The locations of any disposal areas, fills, or other special features shall also be shown. Illustrate existing and proposed topography tying in proposed contours with existing topography.
- g. <u>Clearing and Grading Narrative</u>: The DESCP shall include a table with the quantities of material excavated or filled during construction in all area such as the construction area, laydown area, and transmission and pipeline corridors. This table shall identify whether the materials removed and brought in were temporarily or permanently added or removed and the amount of such material brought in or removed.
- h. Best Management Practices Plan: The DESCP shall identify on the topographic site map(s) the location of the site specific BMPs to be employed during each phase of construction, initial grading, project element excavation and construction, and final grading/stabilization. BMPs shall include measures designed to prevent wind and water erosion. Treatment control BMPs used during construction should enable testing of groundwater and/or stormwater runoff prior to discharge.
- i. <u>Best Management Practices Narrative:</u> The DESCP shall show the location (as identified in H above), timing, and a maintenance schedule of all erosion and sediment control BMPs to be used prior to initial grading, during project excavation and construction, final grading/stabilization, and post-construction. Separate BMP implementation schedules shall be provided for each phase of construction. The maintenance schedule should include post-construction maintenance of structural control BMPs or a statement provided when such information will be available.

Response:

KRCD is currently working on the draft DESCP and expects to submit the plan in April 2008.

Technical Area: Water and Soil Resources

Data Request 71:

Please submit a jurisdictional delineation to the United States Army Corps of Engineers and a section 401 water quality certification application to the RWQCB.

Response:

Three areas in the KRCD CPP project action area were identified to have wetlands and/or waters including the Manning Recharge Basin near Selma, the Kings River near Kingsburg, and intermittent drainages in the Cross Creek area near Traver. Through the implementation of numerous preventive mitigation measures, no fill, dredging, excavations, or negative impacts will occur in those areas, except for minor impacts at the Manning Recharge Basin. At the basin, four transmission line towers will be placed in the bed of the recharge basin which will impact 0.003 acres of poor-quality wetland habitat and a temporary impact will occur to about one-acre of poor-quality wetland habitat for an equipment/tower/construction laydown area. The laydown area will be restored after installation of the towers.

In the AFC, Halstead & Associates noted that a Federal Clean Water Act 404 Permit (Nationwide Permit #12) might be required by the U. S. Army Corps of Engineers (Corps) if they have jurisdiction over such areas as the Manning Recharge Basin which is a man-made, groundwater recharge basin. Halstead & Associates has since contacted the U. S. Army Corps of Engineers (Corps) by letter on January 22, 2008 asking if a permit will be required for the project. A copy of that letter is included as Attachment Water-1. Enclosed with that letter was a copy of the Wetlands and Waters Evaluation (May 2007) report by Halstead & Associates to provide background information to the Corps. The Wetlands and Waters Evaluation is AFC Appendix 8.16-3. A formal Wetland Delineation has not been submitted to the Corps. If a Federal 404 permit is required by the Corps, then a corresponding State 401 Water Quality Certification (Waiver) would be required from the Regional Water Quality Control Board.

Halstead & Associates also wrote in the AFC that a Federal Clean Water Act 404 Permit would not be needed with the Corps for the undercrossings at the Kings River near Kingsburg and intermittent drainages in the Cross Creek area because all work would occur outside the bed, bank, and riparian habitat and that no impacts would occur to those resources. Furthermore, numerous preventive measures (such as buffer zones, fencing, restricted work areas, signage, educational program, on-site biologist, pre- and post-monitoring) were incorporated into the project to completely avoid any potential impacts.

Upon advice from the Corps and if required, a formal Wetland Delineation will be submitted to the Corps in spring 2008. Also if required, a Nationwide Permit #12 application would be completed and submitted to the Corps in spring 2008. Issuance of a permit would likely occur in summer or fall of 2008.

ATTACHMENT WATER-1

Correspondence to Corps

HALSTEAD & ASSOCIATES Environmental / Biological Consultants

296 Burgan Avenue, Clovis, CA 93611 Office (559) 298-2334; Mobile (559) 970-2875 Fax (559) 322-0769; HalsteadEnv@aol.com

January 22, 2008

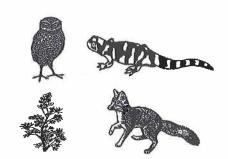
Mr. Ramon Aberasturi U. S. Army Corps of Engineers, Sacramento District Regulatory Branch 1325 J Street Sacramento, CA 95814

RE: <u>Kings River Conservation District's Community Power Plant (Fresno & Tulare Counties)</u>
Potential Need for a Nationwide Permit #12 for the Project

Dear Ramon:

The Kings River Conservation District is proposing a 565 megawatt natural gas-fired power plant near the City of Parlier (Fresno County, California) and has filing an Application For Certification (AFC) with the California Energy Commission for permitting of the plant. Specifically, the plant will set upon a 20 acre parcel just northeast of the intersection of Bethel and Dinuba Avenues. A 15-acre parcel south of the plant site and a 60-acre parcel west of the site will be used as construction yards for the project. The project involves four basic components including the power plant site, natural gas pipeline, water pipeline, and transmission lines (see attached map). Many miles of water pipeline, transmission lines, and gas pipeline are proposed for the project. The first two structures will occur in Fresno County and the gas pipeline will interconnect with an existing gas pipeline near Visalia in Tulare County and run north to the power plant site in Fresno County.

In May 2007, we conducted reconnaissance surveys to evaluate if wetlands and waters occur on the project site and along the water, gas, and transmission line routes. Also, the field surveys were used to examine, evaluate, and determine if wetlands or waters occur on adjacent private lands and could be impacted by the project. Three areas with wetlands and waters occur along the project routes including:







- Cross Creek area south of Traver (Section 34, Township 17S, Range 23E, Traver Quad, Tulare County)
- Kings River near Kingsburg (Section 17, Township 16S, Range 23E, Reedley Quad, Fresno County)
- Manning Recharge Basin north of Selma
 (Sec. 21, Township 15S, Range 22E, Selma Quad, Fresno County)

The Cross Creek area is annual grassland habitat that has six intermittent drainages, some of which are wetlands and some are waters. The gas pipeline will occur in the Road 60 right-of-way; however, private lands adjacent to the right-of-way have wetland ponds, vernal pool wetlands, the endangered Vernal Pool Tadpole Shrimp, Critical Habitats, and potentially other sensitive species too. The Kings River at the gas pipeline route is a waters and has wetland and riparian habitat along its banks. The Manning Recharge Basin has poor quality wetland habitat in the bed of its basin and its banks have upland habitat. The basin receives water via canals and ditches from the Kings River. The basin does not have an outlet and its waters percolate into the ground and do not flow back into other waters or wetlands.

The project has been designed to avoid and/or lessen impacts to wetlands and waters. Examples of such actions include the locating and constructing of the gas pipeline and the water pipeline in the right-of-ways of existing roads. Also, the use of Jack and Bore and Horizontal Directional Drilling techniques to install the gas pipeline underneath the Kings River and the intermittent drainages in the Cross Creek area avoids project impacts at those locales. At the Manning Recharge Basin, four H-framed transmission line towers (with a total of eight legs) will be constructed and erected inside the basin. The footprint of the towers will permanently impact approximately 0.003 acres of poor quality wetland habitat. During construction and erection of the towers, some temporary impacts will also occur to approximately one acre of poor quality wetland habitat in the basin, but that area will be restored.

As noted above and in our Wetlands and Waters Evaluation (enclosed), the KRCD will bore underneath the Kings River and intermittent drainages in the Cross Creek area. No work or impacts will occur in the bed or bank of these waters or in riparian or wetland habitat along their banks. A buffer zone of 500 feet outward on either side of the riparian habitat of the Kings River will occur. A buffer zone of 50 feet outward on either side of the intermittent drainages in the Cross Creek area will occur.

In the AFC, we noted that a Nationwide Permit #12 may be necessary due to the loss of wetland habitat in the recharge basin due to the transmission towers (0.003 acres). During recent wildlife surveys, the bottom of the basin is dry, has been disked, is poor quality wetland habitat, and provides little or no wildlife habitat. The implementation of protective measures will completely avoid impacts to the intermittent drainages, waters, and wetlands in the Cross Creek and Kings River areas.

We request that you advise us on whether a Nationwide Permit #12 permit is applicable to the transmission towers and will even be necessary due to the extremely small impact (0.003 acres). Would you please send us a letter or email concerning the need for a permit and any additional guidance. We are not asking for a Jurisdictional Determination at this time. Enclosed are some wetland data sheets for the project areas noted above.

Sincerely,

Jeffrey A. & Pamela S. Halstead

Owners/Partners/Biologists

cc: Mr. Jim Richards (KRCD)

Ms. Amy Cuellar (Navigant Consulting, Inc.)

Kings River Conservation District Community Power Plant Lincoln Ponds LINCOLN å LINCOLN CLAYTON City of CLAYTON Sanger lity of walter ADAM owler DEL SUMNER City of McCall SOUTH Parlier SOUTH Substation Parlier Wastewater Plant City of SPRINGFIELD Q Reedley EYMANN DINUBA HUNTSMAN HUNTSMAN LILAC City of FLORAL FLORAL Selma AVENUE 430 ROSE ROSE AVENUE 428 **FRESNO** AVENUE 426 COUNTY NEBRASKA NEBRASKA AVENUE 424 AVENUE SAGINAW SAGINAW SAGINAW AVENUE 416 CARUTHERS CARUTHERS CARUTHERS AVENUE 412 LOCAN AVENUE 410 KAMM AVENUE 408 **TULARE** STROUG STROUD COUNTY City of AVENUE 400 Kingsburg KRCD COMMUNITY AVENUE: **POWER PLANT** FAIRWAY AVENUE 392 AVENUE 392 Energy for our France AVENUE 388 **KRCD Community Power Plant** AVENUE 384 Substation 5 1/2 PG&E 69KV Transmission Line PG&E 115kV Transmission Line **KINGS** AVENUE 376 7TH PG&E 230kV Transmission Line COUNTY Proposed Transmission Line Waste Water Percolation Ponds AVENUE 368 AVENUE 368 Proposed Water Supply Pipeline - Option 1 CLINTON Proposed Water Supply Pipeline - Option 2 Proposed Natural Gas Pipeline AVENUE 360 AVENUE 360 Proposed Natural Gas Laydown Area Natural Gas Connection Point SoCal Gas 7000 Line ≡ Freeway Street County Boundary City of City of City Boundary Grangeville (Avenue 304) Visalia Goshan Hanford Denotes 5 Mile Break 2 Miles So Cal Gas 7000 Line

Technical Area: Water and Soil Resources

Data Request 72:

Please discuss in detail whether a 401 certification is required. If required, please discuss compliance with the 401 certification requirement, and include a copy of the application and a schedule for completion of the certification.

Response:

If a Federal 404 Permit is required by the Corps, then a corresponding State 401 Water Quality Certification (waiver) would be required from the RWQCB. If required, the Water Quality Certification (waiver) application would be completed and submitted to the RWQCB in spring 2008. Issuance of a waiver would likely occur in summer or fall of 2008.

Technical Area: Water and Soil Resources

Data Request 73: No Data Request Received.

Response:

Technical Area: Water and Soil Resources

Data Request 74:

To identify the volume of wastewater supply, please provide the monthly and yearly total effluent wastewater volume from each WWTP for the last 10 years (1997 to 2007) and expected volume during the first 10 years of plant operation.

Response:

KRCD expects to have a response available in March 2008.

Technical Area: Water and Soil Resources

Data Request 75:

To identify the power plant water demand, please provide the highest daily process water demand for each month in the year.

Response:

The highest daily process water demand can be derived from the information provided in AFC Section 8.5.3.1-Water Demands. As discussed in the section, a peaking factor of 13% is applied to the daily values to determine the additional usage attributable to a day where ambient temperatures are hotter than average. A similar peaking factor is provided for monthly usage. The average and the highest daily water process water demand expected for each month in the year has been calculated based on the data in Table 8.5-3 and is included as Attachment Water-2.

The peaking factors in the referenced section are intended to quantify extreme daily or monthly conditions and are not intended to apply toward annual water usage.

ATTACHMENT WATER-2

Estimated Process Water Demand

Table 8.5-3 Estimated Process Water Demands KRCD CPP

A	anaga Dama	n d	Peak Demand			
AV	erage Dema	ma	Monthly	Daily		
	Gallons	Million		Gallons	Million	
Acre-feet	per	Gallons	Acre-feet	per	Gallons	
	Minute	Per Day		Minute	Per Day	
254	1,920	2.76	274	2,170	3.12	
239	1,800	2.59	258	2,030	2.92	
274	2,070	2.98	296	2,340	3.37	
280	2,110	3.04	302	2,380	3.43	
309	2,330	3.36	334	2,630	3.79	
317	2,390	3.44	342	2,700	3.89	
343	2,590	3.73	370	2,930	4.22	
338	2,550	3.67	365	2,880	4.15	
315	2,380	3.43	340	2,690	3.87	
300	2,260	3.25	324	2,550	3.67	
261	1,970	2.84	282	2,230	3.21	
255	1,920	2.76	275	2,170	3.12	
290	2,190	3.15	313	2,470	3.56	
3,485	=	-	-	=	-	
	254 239 274 280 309 317 343 338 315 300 261 255 290	Acre-feet Gallons per Minute 254 1,920 239 1,800 274 2,070 280 2,110 309 2,330 317 2,390 343 2,590 338 2,550 315 2,380 300 2,260 261 1,970 255 1,920 290 2,190	Acre-feet per Minute Gallons Per Day 254 1,920 2.76 239 1,800 2.59 274 2,070 2.98 280 2,110 3.04 309 2,330 3.36 317 2,390 3.44 343 2,590 3.73 338 2,550 3.67 315 2,380 3.43 300 2,260 3.25 261 1,970 2.84 255 1,920 2.76 290 2,190 3.15	Average Demand Monthly Acre-feet Gallons per Minute Million Per Day Acre-feet 254 1,920 2.76 274 239 1,800 2.59 258 274 2,070 2.98 296 280 2,110 3.04 302 309 2,330 3.36 334 317 2,390 3.44 342 343 2,590 3.73 370 338 2,550 3.67 365 315 2,380 3.43 340 300 2,260 3.25 324 261 1,970 2.84 282 255 1,920 2.76 275 290 2,190 3.15 313	Average Demand Monthly Date of Control of	

Notes:

Values in million gallons per day assume continuous operation.

Peak monthly demand based on peaking factor of 8%.

Peak daily demand based on peaking factor of 13%.

Table revised February 11, 2008, for response to Data Request #75.

Technical Area: Water and Soil Resources

Data Request 76:

Please discuss whether there are customers, other than the proposed project, of the wastewater and their current and future wastewater requirements.

Response:

There are no current customers for wastewater streams from either the Sanger WWTP or the Parlier WWTP. The wastewater generated by the Sanger WWTP and the Parlier WWTP is secondarily treated effluent and does not meet Title 22 standards and thus is not suitable for reuse. Both WWTPs dispose of the water by ponding and subsequent percolation. The RWQCB is encouraging the Sanger WWTP and the Parlier WWTP to reduce the amount of effluent that is percolated as the effluent degrades the native groundwater. The RWQCB supports this project.

Technical Area: Water and Soil Resources

Data Request 77:

Please provide the number of days/hours and AF per year during which each WWTP experienced an interruption in wastewater discharge over past 10 years (1997 to 2007).

Response:

The rate of wastewater discharge is not affected by interruptions in WWTP operations. Due to the critical nature of WWTP operation as each city's sole method for disposal of sanitary waste, any outage is short in duration. Each WWTP has backup systems to ensure reliability of operation under adverse conditions. The City Engineer for Parlier reports that there has not been an interruption in the operation of the facility for the past 22 years. The operational experience of the Sanger WWTP is similar. If an interruption of significant duration were to occur, unprocessed wastewater is ponded for later processing and there is no overall loss the volume wastewater discharge.

Technical Area: Water and Soil Resources

Data Request 78:

Please discuss the volume of groundwater that will be required to make up for interruptions to the supply of wastewater and when peak water demand exceeds water supply.

Response:

The supply of wastewater is expected to exceed peak water demands at all times and recovery of percolated effluent is not anticipated under this scenario. Projected data for the year 2010, as provided in AFC Table 8.5-5, demonstrates the amount of wastewater projected to be available exceeds demand for all months. The KRCD CPP is expected to be operational in 2011.

With respect to interruptions to the wastewater supply, a reasonable worst case scenario is the unavailability of water from the Sanger WWTP due to problems with the pipeline or the transfer (pumping) facilities and such a problem would require two weeks to correct. (Problems with the operation of either WWTP are not expected to affect wastewater deliveries as discussed in the response to Data Request 77.) Should such a problem occur, it would result in the unavailability of 79.3 AF of water. Based on 2005 data provided in Table 8.5-6 of the AFC, the amount of percolated effluent required to make up this deficit would range from 62.3 AF to the entire 79.3 AF, depending on the time of the year and availability of excess water available from the Parlier WWTP.

Technical Area: Water and Soil Resources

Data Request 79:

Please provide a copy of the wastewater supply agreement with the treatment plants at Parlier and Sanger.

Response:

These agreements are currently being negotiated. Final agreements will be forwarded to the CEC upon execution.

Technical Area: Water and Soil Resources

Data Request 80:

Please provide a list of wells that could be affected by the project's use of groundwater.

Response:

KRCD expects to have a response available in March 2008.

Technical Area: Water and Soil Resources

Data Request 81:

Using Kings Basin Integrated Groundwater Surface Water Model, MODFLOW, or comparable model, please quantify the impact on those wells under the two scenarios listed below and identify all assumptions and data used.

- a. Supplementing the wastewater supply with pumped groundwater during times when peak demand for water from the power plant exceeds the ability of the two wastewater treatment pants to supply water to the power plant project; and
- b. During times of a short and long interruption in the supply of wastewater.

Response:

KRCD expects to have a response available in March 2008.

Technical Area: Water and Soil Resources

Data Request 82:

Please discuss in more detail the use of this tank for surplus wastewater storage when the expected volume of wastewater supply is approximately 210 AF per year less than required.

Response:

The tank is intended to store process water, not wastewater. The primary source of process water is secondarily treated wastewater that undergoes tertiary treatment at the KRCD CPP site and made compliant to Title 22 standards.

With respect to wastewater storage, each WWTP has several ponding basins at their respective sites that can be used to store a substantial amount of surplus wastewater (as discussed in the response to Data Request 84). This storage is not accounted for in the AFC as storage losses due to percolation and evaporation vary depending on a number of conditions beyond the control of the applicant and the most restrictive case was sought for analysis. Each WWTP will make efforts to store surplus wastewater for later sale to the KRCD CPP.

Technical Area: Water and Soil Resources

Data Request 83:

Please discuss the background rationale used in determining the size of the wastewater storage tank.

Response:

The tank is designed to hold approximately one-half day of the anticipated process water demand of the KRCD CPP and is intended for short term fluctuations between the plant water demand and the process water supply provided from the tertiary treatment plant located on the KRCD CPP site.

Technical Area: Water and Soil Resources

Data Request 84:

Please discuss the economic and environmental feasibility of sizing the storage tank such that the use of groundwater is avoided.

Response:

Recovery of percolated effluent through pumping is not anticipated (see response to Data Request 78). Using AFC Table 8.5-6 (based on 2005 figures) as a worst-case scenario, it is technically possible to avoid the recovery of percolated effluent if 210 AF, or 68.4 million gallons, of storage were available. A tank of this size would be extremely large and uneconomical.

Long-term storage of surplus wastewater to avoid the recovery of percolated effluent is not anticipated. According to estimated wastewater effluent projections (in AFC Table 8.5-5), the need for facilities to store surplus wastewater will diminish in 2010, prior to the anticipated completion date of the plant, as growth in population increases the amount of available wastewater. In the event that 2010 projections are not met and storage is required, the applicant will work with the Parlier and Sanger WWTPs to store surplus wastewater and minimize the amount of effluent recovered.

The applicant has previously discussed storing surplus wastewater with representatives of the Parlier and Sanger WWTP. Each WWTP, as a part of its inherit operation, will store surplus water in their respective disposal ponds. If needed, the surplus water can be retrieved and provided to the KRCD CPP. Each site can store a considerable amount of water on a short-term basis, well over the 210 AF discussed above. Of this, approximately 70 AF has been identified as being suitable for long-term storage of wastewater, and should accommodate any shortfall in 2010 effluent projections. This storage is not accounted for in the AFC as storage losses due to percolation and evaporation vary depending on a number of conditions and scenarios beyond the control of the applicant and the most restrictive case was sought for analysis.

Technical Area: Water and Soil Resources

Data Request 85:

Please provide the basis on which this information population was obtained.

Response:

The population information was obtained from engineering reports and is consistent with the similar data obtained from the California Department of Finance. See State of California, Department of Finance, E-4 Population Estimates for Cities, Counties, and the State, 2001-2007 with 2000 Benchmark, May 2007.

Technical Area: Water and Soil Resources

Data Request 86:

Did the per capita wastewater generation take into account new requirements and standards for household and industrial water conservation such as low flush toilets? If not, please include these conservation measures that can be reasonably expected over the life of the project into the wastewater volume estimates or justify their exclusion.

Response:

The per capita wastewater generation figures (cited from other reports prepared for the respective WWTPs) did not account for new household and industrial water conservation standards. It is difficult to account for conservation measures in existing households as some measures have been in effect for years and others have been voluntarily undertaken. It is also difficult to adjust for increases in the sizes of residences being built and any corresponding increase in water fixtures installed.

As of January 1, 2008, both cities, Parlier and Sanger, have adopted the 2007 California Plumbing Code. No changes in the amount of water used by each household is expected as a result of the code change. Therefore, it is expected that the per capita water usage and wastewater generation will remain constant until the next building code change expected on January 1, 2011. Further, any changes made would likely affect only new residences and not the community as a whole.

It is difficult to quantify the amount of water that will be conserved by households in both communities over the life of the project. Assuming a planned life of 30 years (as provided in AFC Section 3.0), the estimated amount of wastewater generated in the year 2040 (per AFC Table 8.5-5) would be 10,051 acre-feet per year for both communities. If households and commercial users in both communities are able to reduce their current consumption by 50%, then only 5,025 acre-feet per year would be available. This would represent 144% of the water required for the KRCD CPP and would easily meet the demand of the KRCD CPP.

Technical Area: Water and Soil Resources

Data Request 87:

Please provide physical and chemical data on the groundwater proposed to be pumped.

Response:

KRCD expects to have a response available in March 2008.

Technical Area: Water and Soil Resources

Data Request 88:

Please provide modeling or numerical calculations that describe how the percolated wastewater would be captured by the proposed groundwater wells.

Response:

KRCD expects to have a response available in March 2008.

Technical Area: Water and Soil Resources

Data Request 89:

Please provide an economic and environmental analysis of air-cooling, air-cooling in combination with a mechanical air-chiller, or a hybrid of air-cooling and limited reclaimed water use.

Response:

KRCD believes that its use of wastewater treated on site to Title 22 reclaimed water standards and then supplemented by percolated effluent through the shallow groundwater well system complies with the CEC's 2003 Integrated Energy Policy Report (IEPR) for the reasons outlined in AFC Chapter 9-Project Alternatives. Included in Section 9.13 is a discussion of alternative cooling systems. A detailed economic analysis is not provided because KRCD believes the project, as designed, complies with CEC and State Water Resources Control Board policies and does not result in significant environmental impacts requiring mitigation.

Technical Area: Traffic and Transportation

Additional Data Request 1:

Please clarify the average and peak number of construction workers expected to be required for the 24 to 27 month construction period.

Response:

The average number of construction workers for the 24 to 27 month construction period will be 288 people as stated in AFC Section 8.6.3.2 page 9. The construction workforce will peak with approximately 700 people as stated in AFC Section 8.6.3.2 page 9.

Technical Area: Traffic and Transportation

Additional Data Request 2:

Please clarify how many peak hour construction workforce trips and peak hour truck trips are expected to be generated during peak construction of the KRCD CPP.

Response:

580 construction workforce trips and 50 truck trips are expected during peak construction.

Technical Area: Traffic and Transportation

Additional Data Request 3:

Please confirm which workforce and trip numbers were used for analysis of traffic impacts.

Response:

The workforce and trip numbers provided in AFC Section 8.6-Traffic and Transportation and as clarified in Additional Data Requests 1 and 2 were the numbers used in the analysis of traffic impacts.